American Gas Association MONTHLY

Industry's War Role Clarified

•

Application of WPB Gas Orders

•

Public Utility Fleet Problems

•

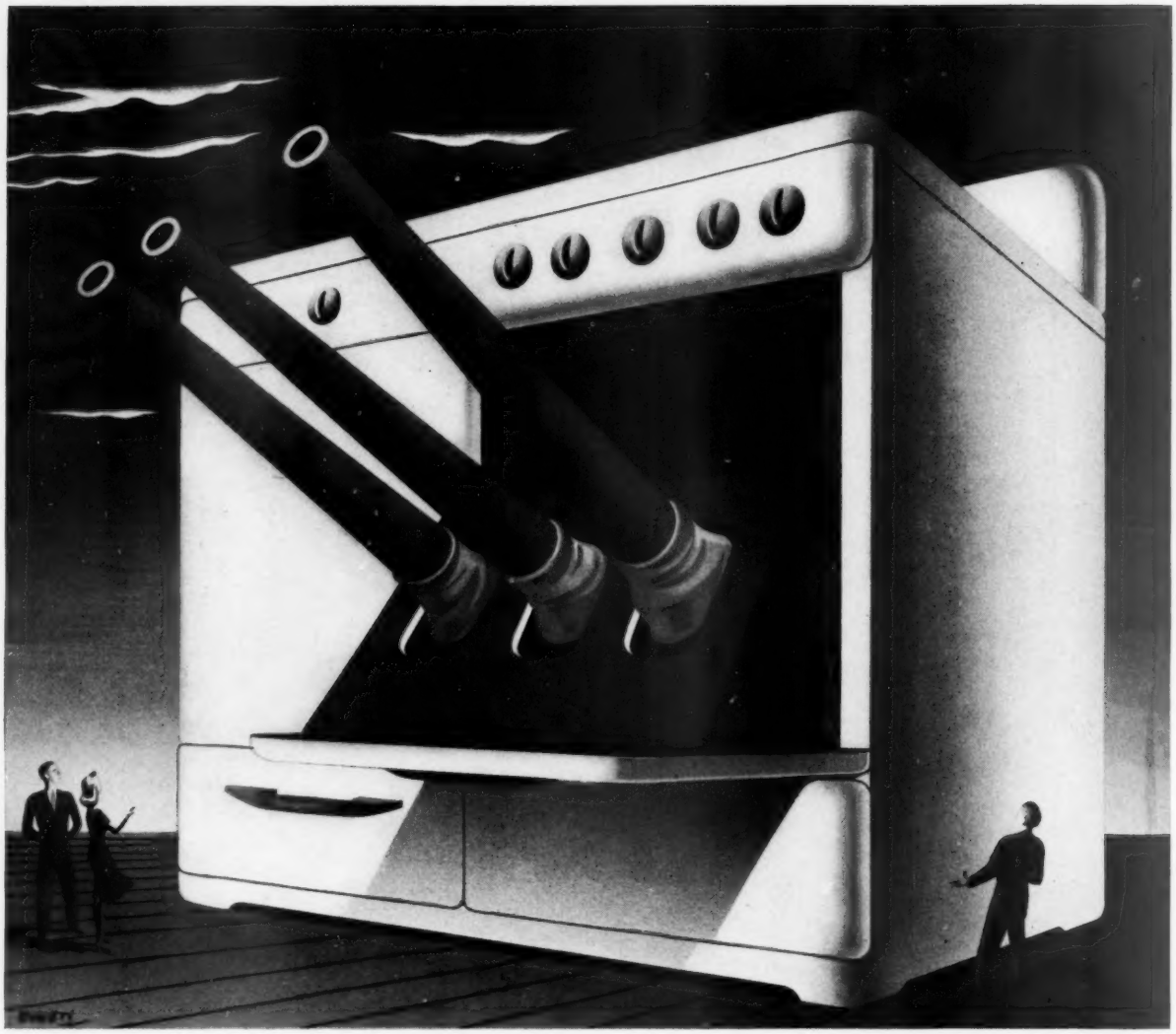
Gas Technicians' Part in War

•

Preparing for Post-War Period

November 1942

VOLUME XXIV NUMBER 10



Battleship Turrets...baked like a Cake...with Gas!

You, and 85,000,000 Americans, know the speed Gas gives to cooking . . .
But think what it means when whole battleship turrets are cooked at one time in Gas ovens as big as a 5-room house!

You know the economy of Gas . . .
But think of the millions of dollars it's saving the country in heat-treating metal for tanks, guns, planes, ships!

You know how much easier Gas heat is to control . . .
But think of steel for shells heated to such a fine point it is forced through molding holes like spaghetti dough!

You know the greater dependability of Gas . . .
But think what it means today when every minute counts . . . when furnaces must not grow cold . . . when uninterrupted production is necessary for Victory!

BUY U. S. WAR BONDS AND STAMPS

TO THE WOMEN: Gas saves time, money and food in every cooking operation. It assures a supply of hot water, economically, instantly. And it helps conserve food safely in silent Gas refrigerators! But remember the importance of Gas for war production. Use what you need—use it wisely—don't waste it!

AMERICAN GAS ASSOCIATION

GAS THE WONDER FUEL FOR COOKING . . .
NOW SPEEDS WAR PRODUCTION

American Gas Association MONTHLY

CONTENTS FOR NOVEMBER 1942

This issue attempts to give a full factual account of the most important material presented at the Annual Meeting in Chicago. It also attempts to give the flavor and spirit of that gathering which demonstrated once again that the gas industry is ready and willing to make all contributions and sacrifices necessary to win the war. . . . Perhaps the most significant trend reflected at the meeting was the increased collaboration of the industry and various government agencies to solve urgent problems of supply and demand. It was agreed that vital war plants have first call on essential raw materials and fuel supplies. . . . A source of gratification to the gas industry was the fact that, without exception, speakers representing WPB, OPC, and War and Navy Departments, gave unqualified approval to the contributions of the industry and its national organization. Capt. Krug, associate director-general for Priorities Control, WPB, went so far as to say that, of two other utilities groups whom he had addressed recently, the gas industry had the best record. . . . While the accent was on injecting new energy into war industries, there was ample attention given to the "home front" problems of nutrition and conservation, and other pertinent subjects.

PAGE

379 War Role of Gas Industry Clarified at Annual Meeting
383 Manpower—The Next Big Problem.....ARTHUR F. BRIDGE
384 Natural Gas Industry and Government Unite to Solve War Problems
387 War Board Orders and Their Application to the Natural Gas Industry.....MARTIN T. BENNETT
391 Demand and Supply of Natural Gas After the War.....J. FRENCH ROBINSON
395 The Gas Industry in War.....ERNEST R. ACKER
401 War Transportation—O. D. T. Order 21 and Its Effect on Public Utility Fleets.....LINN EDSALL
403 Periodic Testing of Meters.....LUIS HILT
404 Association Awards—Individuals Honored for Gas Industry Achievements
407 Personal and Otherwise
410 Convention Calendar
411 Accountants Face New Problems of War Economy
413 Women Collectors.....L. A. MAYO
414 Planning and Preparing for Post-War Sales.....C. V. SORENSON
415 Residential Meeting Discusses Home Front and Post-War Activities
417 Home Service Puts War Job First at 10th Annual Breakfast Meeting
417 Dr. Goodhart on Nutrition and Morale
418 Industrial and Commercial Gas Meetings Probe War Production Factors
420 Technicians' Work Takes on New Significance in All-Out War Program
423 Five-Year Period Extended in Wartime Modification of Appliance Approvals.....GEORGE E. WHITWELL
424 Personnel Service

SUBSCRIPTION · $3.00 A YEAR

Published eleven times a year by the American Gas Association, Inc. Publication Office, American Building, Brattleboro, Vt. Publication is monthly except July and August which will be a bi-monthly issue. Editorial Offices, 420 Lexington Avenue, New York, N. Y. Address all communications to American Building, Brattleboro, Vermont, or to 420 Lexington Ave., New York, N. Y. All manuscript copy for publication should be sent to the editorial offices in New York. The Association does not hold itself responsible for statements and opinions contained in papers and discussions appearing herein. Entered as Second Class Matter at the Post Office at Brattleboro, Vermont, February 10th, 1922, under the Act of March 3, 1879.

Cable Addresses: American Gas Association
AMERIGAS, NEW YORK
American Gas Association Testing Laboratories
AMERGASLAB, CLEVELAND

ARTHUR F. BRIDGE, of Los Angeles, Calif., who was elected President of the American Gas Association at the twenty-fourth Annual Meeting in Chicago, Ill. Mr. Bridge is vice-president and general manager of the Southern Counties Gas Company of California. As a veteran of the first World War, a graduate in engineering of the University of California, and long-time leader of national utility affairs, he is well qualified to head the Association during this war year.

American Gas Association MONTHLY

JAMES M. BEALL, *Editor*

WAR ROLE
. . . of Gas Industry Clarified at Annual Meeting

WITH the lights and shadows of war permeating the proceedings and injecting pressure upon every event, the twenty-fourth annual meeting of the American Gas Association held at LaSalle Hotel, Chicago, Ill., October 5 and 6, was a serious though fruitful affair. It was strictly a working meeting with one primary motive—the strengthening and furtherance of the war effort. The 750 registered delegates from all parts of the country were hard put to keep pace with the split-second schedule of the streamlined war gathering.

•

The meeting served to clarify, coordinate and integrate the forces of government on the one hand and the forces of the gas industry on the other. A blueprint for victory was laid down in broad general terms by spokesmen of the government and the industry. On the government's side, representatives of the War Production Board, the Office of Petroleum Coordinator, and the War Department, were generous in their praise of the initiative and achievements of the gas industry through the channels of its national association. There were also warnings of stern action to come, necessitated by war-created shortages of metals, fuels, transportation and men.

On the gas industry's part, there was expressed complete support of the government's program and renewal of its pledge of unstinted effort in the following resolution which was unanimously adopted:

"*Whereas,* the American Gas Association recognizes the absolute need to win the war in order to preserve our democratic way of life,

"*Therefore,* the American Gas Association reaffirms, in a most forceful manner, its pledge to support our government in the prosecution of the war.

"To that end, we recognize the importance of conserving materials, and of using manpower wisely so that we can continue to supply services which are essential in the war effort.

"In appreciation of the fact that the several agencies of the government which are charged with directing the vigorous prosecution of the war need our active assistance and advice, we pledge continuance of our wholehearted cooperation."

The Association's contributions to the war program were described in an address, "The Gas Industry in War," by Ernest R. Acker, chairman of the Committee on War Activities, which is reproduced elsewhere in this issue. Mr. Acker also presented the treasurer's report which showed that the Association is in sound financial condition.

George S. Hawley, president of the American Gas Association, in his presidential address, dedicated the industry to the war and its prosecution, declaring that "everything in our lives must be subordinated to that end." We have more at stake than our industry and its problems, he pointed out. "Our very economic life hangs in the balance, so that over and above our own troubles we must always keep in mind the necessity for planning and working to retain our American freedoms."

In addition to the individual freedoms of speech, religion, want and fear, President Hawley urged the delegates not to forget the business freedoms, covering the right to own private property and freedom of enterprise, including freedom of contract.

•

President Hawley paid tribute to the work of the gas industry under the banner of the Association, which he said is proving its efficiency and value in wartime. He referred to the high regard of government officials for the Association's work, asserting that, "in normal times united action under the auspices of the Association is highly important, but in time of emergency it is obsolutely essential."

The gas industry, President Hawley said, has grown from a budding promise during the Civil War to a giant at the

New Association Officers

PRESIDENT—Arthur F. Bridge, vice-president and general manager, Southern Counties Gas Company, Los Angeles, Calif.

VICE-PRESIDENT—Ernest R. Acker, president, Central Hudson Gas & Electric Corp., Poughkeepsie, N. Y.

TREASURER—J. L. Llewellyn, insurance manager, The Brooklyn Union Gas Company, Brooklyn, N. Y.

DIRECTORS—TWO YEAR TERMS—R. G. Barnett, vice-president and general manager, Portland Gas & Coke Co., Portland, Ore.; John W. Batten, vice-president and general manager, Michigan Consolidated Gas Co., Detroit, Mich., James A. Brown, engineer in charge of gas operations, Commonwealth & Southern Corp., New York, N. Y.; D. W. Harris, vice-president and general manager, Arkansas Louisiana Gas Co., Shreveport, La.; H. N. Mallon, president, Dresser Manufacturing Co., Bradford, Pa.; Hudson W. Reed, executive vice-president, The Philadelphia Gas Works Co., Philadelphia, Pa.; W. F. Rockwell, president, Pittsburgh Equitable Meter Co., Pittsburgh, Pa.; Herman Russell, president, Rochester Gas & Electric Corp., Rochester, N. Y.; Marcy L. Sperry, president, Washington Gas Light Co., Washington, D. C.; T. J. Strickler, vice-president and general manager, Kansas City Gas Co., Kansas City, Mo.; P. S. Young, chairman, executive committee, Public Service Electric & Gas Co., Newark, N. J.

Association leaders for 1942-1943 term—President-Elect Arthur F. Bridge and Managing Director Alexander Forward

time of the first World War. "Having roots so deep in American soil," he continued, "we cannot stop growing; but the America of tomorrow will be quite different from the America of today, consequently we must adapt ourselves to the new soil as well as cultivate it for the growing of new products, so that when this dreadful era has passed we may reap an abundant harvest of new business, new equipment, new friends."

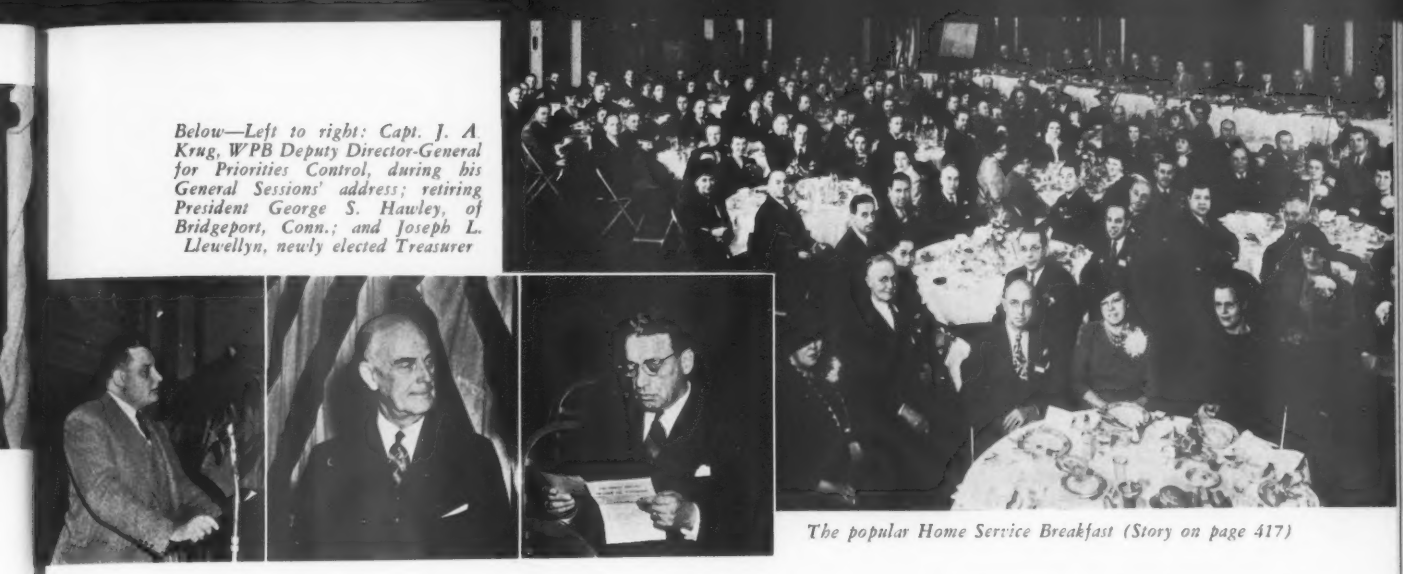
He also spoke of the vital importance of the research programs now in progress at the American Gas Association Laboratories in Cleveland and Los Angeles, and the Institute of Gas Technology in Chicago. In this connection he said: "If we as an industry fail to prepare for post-war days, we will find ourselves following instead of leading, drifting instead of sailing towards a signal goal." He called for research that will result in better utilization of gas and disposition of combustion products, "and perhaps make possible the building of entirely new appliances for domestic use, as well as developing and bettering present appliances."

Three representatives of the War Production Board who addressed the Annual Meeting were in emphatic accord regarding the necessity for conserving gas so that full war requirement could be met. Speaking before the Natural Gas Section, October 5, Martin T. Bennett, Chief, Gas Supply Section, Power Branch, WPB, stated that competition in the natural gas industry must be sacrificed to the needs of the war effort, because of a rapidly expanding need for this fuel in the face of static supplies. Explaining that the petroleum industry is already in the unfortunate position of having to send its customers to competitors, he said that "the gas industry will probably be forced to do the same thing." He also stated that the pooling of transmission facilities may be asked for as well as other developments involving individual sacrifices. His significant address is published in full in this issue.

Rationing of gas for residential use as well as for non-essential industries was mentioned as a possibility by Capt. J. A. Krug, Deputy Director-General for Priorities Control, War Production Board, in an illuminating address before the General Session, October 6. To avoid it, gas companies were advised to begin now a comprehensive program to conserve every possible unit of fuel energy for the growing needs of the war production program.

To stress the seriousness of the situation, Captain Krug said that industry

The camera catches a notable group at the Annual Meeting. Left to right: Henry O. Loebell, New York; A. M. Beebee, Rochester, Chairman, Post-War Planning Committee; John W. Batten, Detroit, Chairman, Committee on Industrial Gas Research; Frank C. Smith, Houston; Frank H. Adams, Toledo; C. A. Tattersall, New York, Chairman, Publicity and Advertising Committee; Mason Mangham, WPB Compliance Division; H. Carl Wolf, Atlanta, Chairman, National Advertising Committee (shaking hands); and Ernest R. Acker, Poughkeepsie, Chairman, Committee on War Activities, and newly elected Vice-President of the American Gas Association



Below—Left to right: Capt. J. A Krug, WPB Deputy Director-General for Priorities Control, during his General Sessions' address; retiring President George S. Hawley, of Bridgeport, Conn.; and Joseph L. Llewellyn, newly elected Treasurer

The popular Home Service Breakfast *(Story on page 417)*

is being asked to restudy its fuel needs with minute care, and with proper consideration given to transportation, in order that the full measure of the nation's heat reserve can be utilized. "Places where gas is best, gas must be used; and those places where coal is a better fuel in terms of economy of transportation and economy in the use of our resources, coal must be used."

He reminded the gas industry of the magnitude of the war job before them, which must be achieved without an appreciable expansion of facilities because of the lack of critical materials, particularly iron and steel. Substitution for critical materials offers less and less prospect for relief, he said, adding that the squeeze will probably make it necessary to tighten up use for maintenance and repairs. He called attention to the large inventory of materials now in the hands of gas utilities and urged the industry to develop arrangements, through its Association, for sharing this inventory so that it will be used to utmost advantage.

The final quarter of this year and the first quarter of 1943 will be most critical from the point of view of materials, in Capt. Krug's opinion. Even getting over the hump in the materials situation does not mean the end of trouble for the gas companies, he declared, since a serious manpower shortage is impending. "Before we get much further in the war, all of our physically fit will have to get into the Army and Navy. The country cannot permit men capable of fighting to hold down jobs in industry," he stated. He expressed the belief that next year will find girls and women reading meters, doing testing work and general labor jobs in addition to all of the office work.

Returning to conservation, Capt. Krug urged gas house heating customers to restrict temperatures in the home to 65 degrees, which is the level set for oil burning customers. He also asked the gas industry to seek ways of inducing domestic customers to adjust their demands to alleviate the peak load problem.

The third speaker from WPB, Mason Manghum of the Compliance Division, predicted a long, bloody and costly war in which the United Nations must outthink, outfight and outproduce their enemies. He referred to the critical shortages of vital materials but also asserted that there was a shortage of "fighting spirit and the will to win." He said the average person is not thoroughly aroused nor hardened enough to make the necessary sacrifice needed to win the war.

Speaking of the Compliance Division's activities, he said that of thousands of business men investigated few

Chairmen for 1942-1943

ACCOUNTING SECTION: Chairman—L. A. Mayo, Connecticut Light & Power Company, Hartford, Conn.; Vice-Chairman—O. H. Ritenour, Washington Gas Light Company, Washington, D. C.

INDUSTRIAL & COMMERCIAL GAS SECTION: Chairman—B. H. Gardner, Columbia Gas & Electric Corporation, Columbus, Ohio; Vice-Chairman—Charles G. Young, Springfield Gas Light Co., Springfield, Mass.

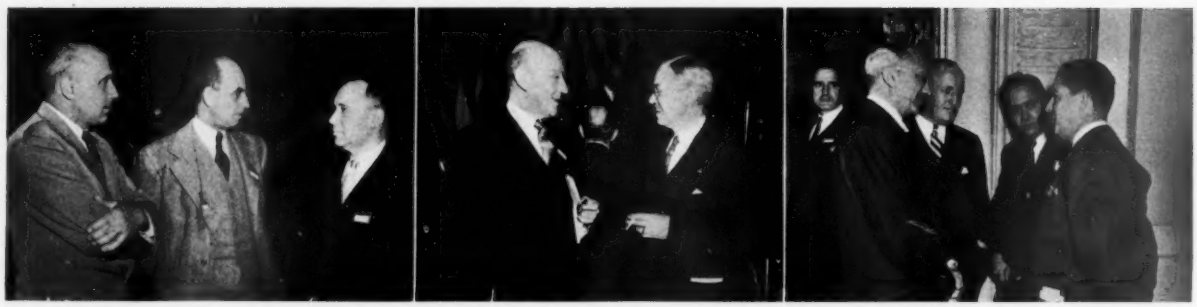
MANUFACTURERS' SECTION: Chairman—John A. Robertshaw, Robershaw Thermostat Company, Youngwood, Pa.

NATURAL GAS SECTION: Chairman—Burt R. Bay, Northern Natural Gas Company, Omaha, Nebraska; Vice-Chairman—R. E. Wertz, Amarillo Gas Company, Amarillo, Texas.

RESIDENTIAL SECTION: Chairman—B. A. Seiple, Jersey Central Power & Light Company, Asbury Park, N. J.; Vice-Chairman—C. V. Sorenson, Midland Utilities Company, Hammond, Indiana.

TECHNICAL SECTION: Chairman—Harold L. Gaidry, New Orleans Public Service Inc., New Orleans, La.; Vice-Chairman—Charles F. Turner, East Ohio Gas Company, Cleveland, Ohio.

Candid camera shot of the Executive Session. Paul R. Taylor, New York, is on the rostrum. At extreme left is Past President Herman Russell, of Rochester



Between sessions at Chicago—Left to right: R. E. Kruger, Rochester, winner of the 1942 Beal Medal; Carl A. Schlegel, Philadelphia; A. M. Beebee, Rochester, Chairman, Post-War Planning Committee; E. P. Noppel, New York; R. H. Burdick, Birmingham; S. J. Beale, New York; Frank C. Smith, Houston; H. Leigh Whitelaw; Floyd C. Brown, Chicago; and M. L. Stirling, Tulsa

were found to be malicious chiselers. "The American business man is eminently fair and honest," he declared.

Division of the natural gas industry into five regions such as the present set-up under the Office of Petroleum Coordinator is a constructive step which will outlast the war, in the opinion of J. French Robinson, chairman, A. G. A. Natural Gas Section and president, The East Ohio Gas Co., Cleveland, who delivered an outstanding address at the General Session and presided over the Natural Gas meeting. "They are natural divisions of supply and utilization," he stated, "and they are keyed to each other, and all for each other, into a central coordination system which relates an entire industry to an entire nation." The system works, despite the haste and strain of war which forged it into being, he said.

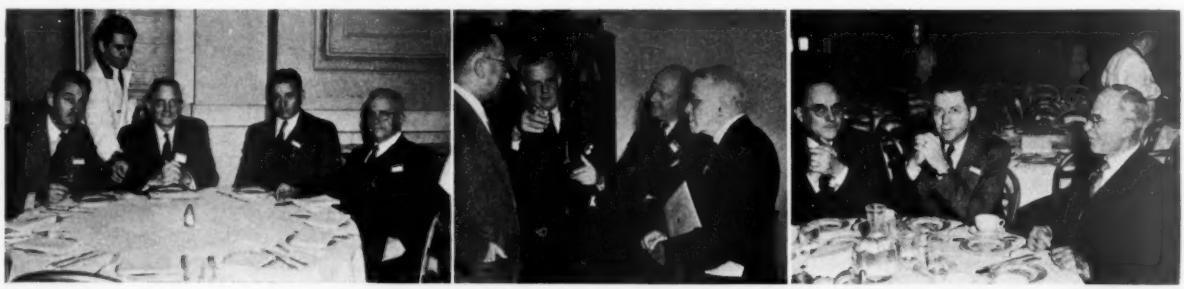
Mr. Robinson stated that "the successful integration of our industry with other industries affecting the mutual exchange of critical materials needed will also be retained as a profitable lesson taught by this war. . . . We can look forward also to an increasing insistence upon the education and guidance of our consumers in the general utilization of gas, not alone for the purpose of greater customer satisfaction but for the purpose of economical, and, hence, gas conservation purposes as well." Mr. Robinson's scholarly summary of the supply and requirements of natural gas is reproduced elsewhere in this issue.

In introducing the post-war planning section of the program, A. M. Beebee, Rochester Gas & Electric Corp., newly appointed chairman of the Association's Post-War Planning Committee, emphasized that the first concern was winning the war but that far-sighted leadership also called for seeing through and beyond the holocaust to days of peace and permanence. He stated that the purpose of his committee, now in process of organization, "is to consider post-war problems of the industry . . . and to coordinate its activities with the domestic gas research program to the end that market requirements may be anticipated and domestic research may thereby anticipate economic trends."

Pointing out that such planning is prominent in our government's program, Mr. Beebee declared that there is no question but that the war will have a drastic effect on the gas industry. A profound change in income levels and in the form value of competing fuels are among the factors which will bear most careful consideration and study, he said. He urged members of the gas industry to send suggestions to the committee for consideration in its program.

Discussing war and post-war research at the Institute of Gas Technology, Dr. F. W. Sullivan, Jr., technical director of the Institute, mentioned the project concerned with the preparation of butadiene, the principal raw material of synthetic rubber, and other projects directly related to the war effort. In addition to the Institute's educational program involving the training of technical students, sponsored projects are being prosecuted actively to increase effectiveness in the war program and to establish a basis for post-war development and planning.

Mr. Sullivan stated that a government agency is sponsoring one project and the Institute's facilities are being offered to other branches of the government and to the military services for



Non-stop business sessions, even at lunch, were a part of this streamlined war meeting. Left to right: E. V. Kesinger, Chicago; Harry D. Hancock, New York, Past Chairman, Natural Gas Section; J. I. Cormany, Kansas City; J. R. Abercrombie, Kansas City; J. French Robinson, Cleveland, Chairman, Natural Gas Section; L. W. Heath, Allentown; L. I. Pollitt, Jr., S. P. Cobb, New York; E. F. Wressell, Hammond, Chairman, Property Records Committee; R. L. McVey, Denver; and John D. Alden, Asbury Park, N. J.

use in any way which may contribute to the advancement of the war effort. Technical personnel of the Institute engaged in research has doubled recently and further expansion is in prospect, he said.

Accelerated programs of research involving domestic, commercial and industrial uses of gas to be conducted by the American Gas Association were strongly advocated in papers by R. L. Fletcher, of Providence, chairman, Committee on Domestic Gas Research and John W. Batten, of Detroit, chairman, Committee on Industrial Gas Research. Mr. Fletcher's paper was presented by John J. Quinn of Boston.

Pointing out that the domestic markets are undergoing radical changes and that the post-war period will offer unheard of opportunities, Mr. Fletcher outlined a working program of research covering domestic gas appliances and utilization. He contended that domestic gas research cannot wait until the war is over, because research takes time.

The supreme challenge of all time came to industrial gas and industrial gas equipment when the preparedness program started and was quickly followed by the all-out war production program, Mr. Batten stated in presenting the industrial and commercial gas research program. He credited the equipment manufacturers and the Association's past research for being ready to make great contributions in the production of parts going into guns, tanks, and airplanes. He estimated that gas is supplying 50% of the total heat requirements for such purposes.

Metals War Production Key

"Metal is the dominating word in the war production program," Mr. Batten asserted in explaining the problems met by industrial gas fuel and equipment. "The term 'metal' to the gas industry means steel and its many alloys, copper and brass, aluminum and magnesium, and other items of less importance. The processing of metal means the application of gas to melting, to high temperature heating for forming, to moderate heating for hardening, to lower temperature heating for stress relieving.

"These heating processes mean to the gas industry the adjustment of existing equipment and the design of new equipment to conform with the exacting specifications of Army and Navy requirements," he continued. The gas industry because of awards for individual achievement at the General Luncheon, October 6, and its research and experience was not unprepared to cope with such war emergency problems, Mr. Batten said, in urging continuance of the present program.

Manpower—The Next Big Problem

By Arthur F. Bridge

President-Elect, American Gas Association

DESPITE general recognition of our industry as essential to the war program, the real extent of our future manpower shortage has only recently been indicated through pronouncements by the Director of Selective Service. The Director of Manpower is advocating early enactment of an all-inclusive National Service law which would establish labor priorities and provide for selective transfer of workers as between industries.

We are now definitely informed that able-bodied men will receive only temporary deferment pending training of replacements, even though both the industry and the individual occupation are deemed essential. Selective Service takes the position that if men can be trained for highly technical military assignments within a few months, industry can do the same.

I believe this situation can be adequately met if we view it realistically, appraise our manpower, decide what occupations are indispensable, and proceed promptly to hire and train women and over-age men replacements. In making such a survey we must answer two fundamental questions—Will the man be drafted? and Can we get along without filling his job?

Curtailment of less essential services and activities will provide some measure of relief; and, due to materials' shortages, this has already occurred in the fields of sales and construction. For companies engaged in gas distribution, appliance servicing absorbs a sizable proportion of total remaining man-hours; and while selective curtailment of this activity presents a difficult problem, to be avoided as long as possible, we may be forced to reduce it to cover hazard calls only. Other possible curtailments and substitute procedures which are being widely adopted by public utilities are bi-monthly or quarterly meter reading, and elimination of personal contact collections.

Though service curtailment appears as the logical first step, the two moves should go hand in hand. It isn't sound practice to suddenly lop off a wide variety of services and then attempt to fill the residual vacancies with an overnight recruiting program. That's why we need action now—so that the job can be done gradually and carefully.

I believe that first emphasis should be placed on recruiting. There are two reasons for this. We shall have increasing competition for these new types of labor, and recruits should be trained while the experienced employees are still here to do that job.

Furthermore, as we carry on recruiting, we'll learn more about the availability and performance of new labor groups; we'll find out how efficient women can be in various capacities; and where we can fit in the elderly men. As the picture clarifies, we'll know just how far it is necessary to curtail our normal activities, and the reduction in service will be gradual, thus minimizing ill effects on public relations.

It appears that the sooner we get underway with a planned recruiting and training program, the more likely we are to avoid serious upsets later. Even though it means extra expense to retain and train groups of new people now, that practice will result in long-range economy.

Obviously women constitute the only large labor reserve, but competition for them will be keen—is already in war-production areas. While as yet we have little information relative to their performance in utility jobs heretofore filled exclusively by men, experience in Europe in all lines, and in the aircraft industry in this country, leads to the conclusion that there are few occupations which they can't handle if given proper and sufficient training.

Of special interest at the Annual Meeting were the presentation of the popular Home Service Breakfast meeting on the morning of the same day. These features as well as reports of the Natural Gas, Accounting, Residential, Commercial and Industrial Gas, and Technical sessions are covered in separate articles in this issue.

Natural Gas . . . *Industry and Government Unite to Solve War Problems*

Chairman J. French Robinson, left, gets a smile of approval from his successors as Natural Gas Section officers—Chairman-Elect Burt R. Bay, of Omaha; and Vice-Chairman-Elect R. E. Wertz, of Amarillo

AN over-all picture of the war job of the natural gas industry was painted in realistic detail at the annual meeting of the Natural Gas Section of the American Gas Association October 5 in Chicago. Under the able leadership of J. French Robinson, Chairman of the Section, and President, The East Ohio Gas Company, Cleveland, the war requirements of the five natural gas districts were expounded by industry speakers and representatives of the War Production Board and the Office of Petroleum Coordinator.

The core of the problem of supplying a voracious war production giant with nourishing natural gas fuel was explained as essentially a problem of transportation and the availability of critical materials. Conservation and integration on a national scale were the keynotes. As succinctly stated by the Chairman, "The stupendous and gargantuan nature of this war problem can best be stated by this literal fact, that what was true of great individual units of great American industries in the specialized genius which we call 'mass production,' must now be expanded to embrace the entire nation as if it were one single mass production plant."

Opening the meeting, the officers of the Association, George S. Hawley, President, A. F. Bridge, Vice-President, and Major Alexander Forward, Managing Director, each congratulated the natural gas industry on its accomplishments and emphasized its great responsibilities. Mr. Bridge made a salient contribution on the impending shortage of manpower which is reproduced elsewhere in this issue. Major Forward expressed the opinion that the natural gas industry surely has earned an Army and Navy E for wartime achievement and "with a heritage of enterprise and daring will be found fully adaptable" to changed conditions of tomorrow.

Poe Calls Industry Vital

E. Holley Poe, Director, Natural Gas-Natural Gasoline Division, Office of Petroleum Coordinator for War, Washington, D. C., under whose direction the machinery to vitalize and coordinate the natural gas industry for war effort is set up, called the industry "one of the nation's most vital energy sources." With 8 million domestic, commercial and industrial customers in 34 states, he pointed out that in excess of 50% of its volume is for industrial purposes which directly or indirectly affect the war program.

"Since 1938, the sendout of natural gas for industrial and commercial purposes has increased by more than 10% per year," he said. "Indications are that this year will exceed last year by 25% and in some areas as much as 40%—a direct result of the War Production program."

"As never before in its history," Mr. Poe said, "the natural gas business is one of supply and demand with a restricted deliverability resulting from limited supply of steel for augmentation of natural gas pipe lines and development of natural gas reserves. . . . The cooperative solution of these problems is our joint war job." He described the organization of the Office of Petroleum Coordinator for War as a cooperative agency of industry and government with coordinating committees nominated by the industry as an essential part of the organization. The Petroleum Industry War Council draws its membership from these committees, he stated.

Conservation Orders Flexible

The Natural Gas and Natural Gasoline Division, Mr. Poe emphasized, in reviewing the industry's applications to acquire or use critical materials, is guided by the theory that "the most effective promotion of the war program demands the minimum expenditure of critical materials consistent with proper and adequate development of gas reserves and resources required, and only as required, for such program." Recommendations are made, he asserted, only after cautious study with a view to determining whether or not additional gas is needed for the immediate future, or whether a proposed overall development program designed to drill a specific number of wells is necessary to meet a proven required deliverability.

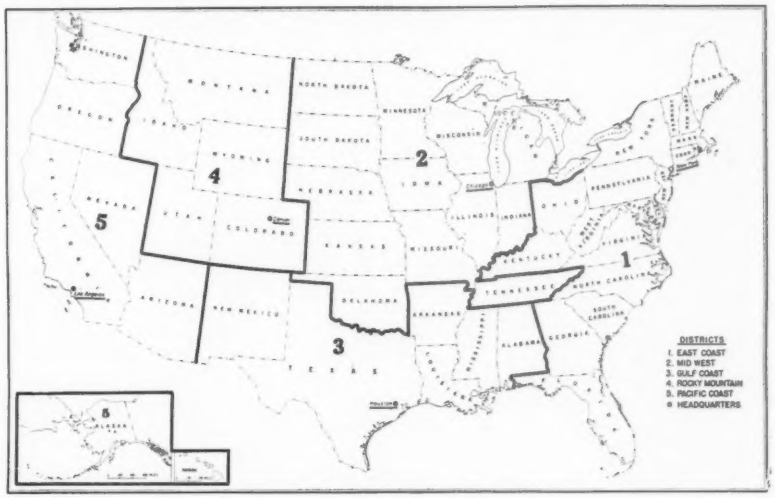
Conservation Order M-68, designed to conserve critical materials by limiting their use in the production of oil and natural gas, is flexible, Mr. Poe explained, and "can be altered or supplemented from time to time to achieve stricter control over the use of materials consistent with the demands for oil and gas."

Mr. Poe concluded: "The war emergency will undoubtedly cause many dislocations in our traditional methods of operation. But by the same token the dire necessity of this war program will teach us much about better production methods, better transportation and dis-

tribution methods, better ways and means of conserving the product, and ways and means of preventing the economic dissipation of a vital natural resource."

Martin T. Bennett, Chief, Gas Supply Section, Power Branch, War Production Board, Washington, D. C., gave a valuable exposition of WPB orders and their application to the natural gas industry which is printed in full in this issue.

In introducing the symposium of chairman of the five natural gas districts of the country to discuss "war requirements," Chairman Robinson, speaking as Chairman of District No. 1, paid tribute to the "splendid system of national coordination which has been evolved under the Office of Petroleum Coordinator," and particularly to Mr. Ickes as the first American petroleum coordinator. Contending that the myriad of war problems is soluble in no other way than "by coordinated knowledge and coordinated effort centrally directed," Chairman Robinson asserted that the pattern of the industry imposed by wartime necessity will never be lost. "There is at least a germ of permanence in this formation of our industry which we would be blind if we did not see, and foolish if we did not nourish and help it to grow into an all-time greater social usefulness."



Natural gas coordinating districts

District 1

Chairman Robinson summarized the situation in District 1, which is the Appalachian area, as follows:

"The general problem of District 1 is, of course, the same as in all five of the districts. It is a problem of the greatest possible supply to meet a demand of natural gas which is unprecedented. In respect to the relation of supply and demand of natural gas, the Appalachian area is probably the most critical of all five districts. It is the heavy industrial district of the country. Its war production is at a constant peak. Initially, therefore our problem is that of studying the sources of supply, increasing that supply to the maximum and sustaining it for the seasonal jerky demands which are characteristic of natural gas operating. . . .

"A recent study disclosed that the annual sales for the coming year will amount to approximately 500 billion cubic feet. It is of interest to note that the Appalachian area reached its maximum demands for natural gas in 1917 with a total of 518 billion cubic feet. The number of customers in 1917 was 1,736,219. In 1935 the number of consumers was 2,633,220 and their demand was 305 billion 791 million cubic feet. There are at the present time approximately 3,000,000 consumers in the Appalachian area. The peak day requirements are approximately 2 billion 600 million cubic feet.

"The only way these peaks can be met is by the use of underground storage of gas, which storage in District 1 amounts to 85 billion cubic feet. This gas can be drawn from storage at the rate of 600 million cubic feet per day for a few peak days. The demands, however, are so great that, taking into consideration the increased consumption of natural gas for war effort and taking into consideration the standby equipment that many consumers now have, it is evident there will be a shortage for a few days this winter of approximately 100 million cubic feet of gas per day.

"The total reserves of natural gas in District 1 have been estimated as 5¼ trillion cubic feet (December 31, 1941). This information is in the hands of the central coordination staff in Washington. Its value can be and will be translated by them in terms of the greatest usefulness, against the background of national needs, whether wartime or peacetime."

Speakers at the Natural Gas Meeting. Left to right: R. E. Wertz, incoming Vice-Chairman; William Moeller, Jr., Chairman, OPC District 5; R. W. Hendee, Chairman, District 4; Burt R. Bay, Chairman, District 2, and incoming Section Chairman; and Arthur F. Bridge, A. G. A. President-Elect

District 2

Burt R. Bay, President, Northern Natural Gas Co., Omaha, Nebraska, as Chairman of District 2, reported:

"It appears that the present gas supply of District 2, with the exception of a few of the smaller operating companies who depend upon so-called 'local fields,' is reasonably adequate to meet all needs for the present. The principal cause for concern over the natural gas supply for consumers in this district is definitely that which arises from the lack of pipe line transmission capacity among several of the larger gas pipe line concerns, to fully supply all of their connected load. These companies, through years past, have followed the practice of selling large volumes of so-called

'off-peak interruptible gas' to industrial consumers. Some of such industries have provided coal and others fuel oil for standby purposes.

"Ordinarily those industries having oil standby have only suffered a minor amount of curtailment of gas during winter periods. Today, however, with the heavy burden of serving new war industries and the increased demands of other industries imposed upon the gas pipe line systems, coupled with our inability to expand capacity because of shortage of critical materials, some increased curtailment of this type of gas sale appears to be a certainty.

"This service to industry is complicated by the critical oil situation in the Atlantic seaboard states which has brought about the conversion to eastern states service of approximately seventy-two percent of the total of all tank cars in the area east of the Rocky Mountains, in order to offset tanker losses and their diversion to war uses. As a result of this latter influence, we face possible fuel oil shortages in some industrial centers within the district and those of us who supply gas to industries with oil standby have an obligation to call this situation to the attention of all such customers.

Standby Facilities Essential

"We should do this before it is too late, and while there is still time to convert to coal standby or provide additional storage facilities and procure fuel oil. Otherwise the war effort of some industries may be interfered with or some gas utility companies may be subjected to that provision of L-31 which requires the operation of gas manufacturing facilities in favor of the requirements of essential war industries in case of shortage of natural gas.

"As further support of this warning, I point out that the natural gas pipe line companies whose operations are confined principally to District 2 experienced a maximum day last winter approximating 2,200 million cubic feet and this same group of companies estimate a demand of 2,750 million cubic feet on the maximum day during the coming winter, or an increase of 25 per cent. It is common knowledge that only a very few additions to transmission capacity have been permitted this year because of the greater need elsewhere for critical materials. It is true that weather will be a factor in the situation and even if we discount to a considerable extent the estimated requirement for maximum days during the coming winter, it remains evident that some increased curtailment of industry using natural gas will be the order, and while it seems that coal supplies can be had, heavy industrial oil may only be available in decreased quantities.

"I have said that in the main, the natural gas supplies for consumers in this district appear adequate for the present. This comes about principally because most of the major gas systems tap two of the country's largest gas reserves, the Texas Panhandle and Hugoton Fields. These areas are far removed from the principal gas markets in the district and therefore it is increasingly important that operating companies have a developed supply at all times in excess of their actual day to day needs.

"This is the condition that exists today but as time passes the need for drilling additional wells in such fields is as surely a reality as it is in other producing areas.

R. G. Griswold, President, Gas Advisers Inc., New York, and J. French Robinson, President, East Ohio Gas Co., Cleveland

The importance of maintaining adequate gas supplies in all producing fields is emphasized by today's abnormal demands for gas, and governmental agencies should recognize this in any future orders affecting drilling or the allocation of steel to essential industry.

"The present state of all proven natural gas reserves in District 2 may be compared to that of the oil industry inasmuch as the discovery of reserves in new fields during the last few years has not kept pace with the rate of withdrawals from undeveloped reserves, believed to be ample for many years to come. I cannot refrain from the comment that any long range view recommends strict adherence to the best known conservation practices by the combined oil, natural gas, natural gasoline and carbon black industries, in the drilling of wells, their operation and maintenance, and in the utilization of gas in the fields, if these industries consider the future of their own operations and the imperative need for husbanding the sweet dry gas supply for industry and essential civilian uses.

"Speaking of the ever-present need for the conservation of our natural gas resources, which applies equally to all natural resources, the old saying 'it is an ill wind,' etc., may apply to the present day rubber situation. Current reports are to the effect that in the compounding of rubber for the manufacture of tires, from the various kinds of synthetics, it has been found that the so-called 'soft' or 'furnace black' is superior in some respects to channel black, heretofore used when natural rubber supplies were available and that it is quite common to obtain a yield of 6 to 8 pounds of soft black from a thousand cubic feet of gas which is in contrast with about 1.4 pounds of channel black.

"We may witness a reduction in the use of natural gas for such purpose even though the output of black is increased after the completion of all butadiene and styrene plants now projected and under construction. Mention of this is made because of its possible bearing upon the future gas supply in the Texas Panhandle Field from which a substantial part of the gas for markets in District 2 is presently obtained and about 78% of this country's carbon black is made.

"If practice proves what appears to be indicated, there should be a material reduction in the amount of natural gas burned to carbon black, which would extend the life of the Panhandle field. Texas Railroad Commission records show that approximately 290 billion cubic feet of gas was used during the year of 1941 for the manufacture of carbon black. Substantially all of this black was made by the 'channel' process. If the 'soft black' process of manufacture had been used solely and the average yield were only 6 pounds per M.C.F., the gas volume referred to would have been reduced to 70 billion cubic feet."

District 3

N. C. McGowen, President, United Gas Pipe Line Co., Shreveport, La., and Chairman of District 3, reported as follows:

"District 3 is the largest district in the United States in the production and, possibly, in the refining of crude oil and the production of natural gas.

"The committee in this district had two main problems—natural gasoline and natural gas. Our first job was to make a survey of natural gasoline facilities and type to determine the quantities of butane that might be used in the 100 octane program and also the butanes that might be used either in their present state or carried on to iso-butanes and other products into synthetic rubber. Our district now makes a monthly report of what we have to the Refining Committee which indicates those of our products which it needs in connection with the manufacture of essential war products. When we have transportation for them those products move on to the refinery which needs them. Additional products are moving through their regular channels on the same basis as other products from non-war refineries.

"In reference to natural gas, early in the year a survey was started which is not yet complete but indicates that there is a reserve of somewhere in the neighborhood of 65 to 75 trillion cubic feet. This surthe American Gas Association is now under way at The Institute of Gas Technology, Dr. E. W. Guernsey, of Baltimore, chairman of the Gas Conditioning subcommittee on this subject, told the meeting. This work is directed broadly toward "the improvement of our knowledge regarding the identity and proportions of the sulfur compounds in typical gases and especially toward the development of suitable analytical methods for such identification and analysis." The Institute was selected for this project because it is already conducting an

(Continued on page 422)

War Board Orders . . . *and Their Application to the Natural Gas Industry*

By MARTIN T. BENNETT
Chief, Gas Supply Section, Power Branch, War Production Board, Washington, D. C.

I APPRECIATE very much this opportunity to discuss for you the general plan of the War Production Board orders which affect your operations most closely. Naturally my discussion must be general and must be limited because many, if not most, of the War Production Board orders affect the industry in one way or another.

War Production Board orders affect the flow of materials and equipment which the industry requires. Orders P-19-h on projects, and P-46 on maintenance, control the use of materials in expanding and maintaining your facilities.

Materials Picture Darkens

Mr. Krug is going to tell you more about the materials situation tomorrow. The picture has been an ever-changing one and an ever-darkening one. The orders and requirements have had to change to keep pace with the changes in quantities of supplies and in the necessities for critical materials. War Production Board orders affect many other necessities of the natural gas industry such as the availability of electric power and telephone and transportation services, but none of these is as important as those orders which directly affect your handling of your own commodity.

Mr. Poe is going to tell you about those War Production Board orders which have been assigned for administration to the Office of Petroleum Coordinator for War. His particular concern is the development of the supplies of the commodity which you have to secure in order to continue your business. The Power Branch is concerned with those orders which have to do with the handling and the disposal of these supplies. In both cases, we have to relate administration of the orders to the problems of securing materials adequate for fulfilling the industries' functions. The list of involved critical materials is varied, but by and large, steel is the big item.

Probably I do not need to tell you how critical the steel situation is. Most of you have felt it when you have attempted to secure pipe which is one of the most critical of the finished forms of steel. I do not need to tell you that you have a most precious product to sell because many of you are experiencing or are expecting difficulties in serving the loads which you now have.

The tradition of the industry that it deals in an abundant and cheap fuel is now a handicap. The apparent ease with which natural gas has been brought from flush producing areas to market areas has made it difficult to realize that in terms of additional critical steel, natural gas is not cheap. The ever-expanding requirements within many market areas have made it no longer abundant. We may have to revise the industry's slogan, "You can do it better with gas," to a new slogan —"For the duration, you had better not do it with gas."

The reason for this is obvious to you. You know better than anyone else that many ordnance, armament and other war production operations have to be done with gas which isn't leaving much surplus for less essential uses.

If a million or more tons of new steel were to be made available to the industry next year for extending to new supply areas and for reinforcing transmission lines, our problems would seem quite simple compared to what we probably will have to deal with. Such a large portion of the 86 million tons of the annual steel production is far too great an inroad on the necessary programs for armament and shipping and synthetic rubber and the expansion of steel production itself. Something else must be done!

The other thing that has to be done, and has to be done first, is to utilize the present facilities to their maximum before any new facilities are provided. By present facilities I do not mean those of any particular ownership but any facility which may be available to

Martin T. Bennett

Depicting the integration, curtailment and allocation provisions being made to effect thorough mobilization of the gas industry for war, Mr. Bennett's address was without doubt one of the most significant and important contributions to the Annual Meeting. The war makes imperative he asserts, that existing facilities be used to as near 100% load factor as possible, without regard for ownership or competitive factors.

an area which needs more gas regardless of ownership of those facilities. The industry has a tremendous responsibility to utilize all of the steel which it has already obtained. We cannot put new steel where old steel can do the job.

The War Production Board Natural Gas Limitation Order L-31 provides the authority for securing maximum use of present facilities in the war effort. The integration, the curtailment, and the allocation provisions furnish the methods by which the mobilization of the gas industry is being effected. The Power Branch has the dual responsibility for the utilization of existing facilities as well as for giving priority assistance for securing necessary new facilities.

War Aim 100% Load Factor

All this may be expressed in another way. The war aim of the natural gas industry must be to utilize existing transmission facilities with as near to a 100 per cent load factor as the limited use of additional critical materials will allow. A number of methods for increasing the transmission load factors may be listed. I hesitate to give a list of them in numbered order because the order might signify some order of importance or of value. Which one or which group of several of these methods may be best for a given situation will depend upon that situation and upon the relationship of that one to neighboring situations of supply and requirements.

One of the most promising devices for increasing load factor is the storage of gas at or near the markets. In some cases, storage may be available in partially or totally depleted fields without requiring the use of much critical materials. In one case, at least, storage of liquefied natural gas has provided a very large volume of peak delivery. Unfortunately, it has required critical materials and will not supply peaks over very wide duration.

In another case we secured help through the war powers of Defense Plant Corporation. Complete possession was taken of the land rights in an oil field in order to devote them to a unitized storage project. Subsurface rights can be condemned for war purposes in a manner which will allow immediate possession. We may find this a fruitful source of help.

Another most obvious treatment of the problem is to have one company transport gas for another in order that transmission capacity will not be duplicated. Unfortunately, in a given area, the peak loads of all transmission companies usually come at about the same time so that this method would only help substantially where one of the companies had excess capacity.

Another method, akin to storage in many respects, is the operation of manufactured gas standby facilities near to the markets. This is similar to storage because as a matter of fact, it requires storage of solid or liquid fuel which is converted to gas as it may be needed. A somewhat analogous and similar method can be employed by utilizing customers' standby heating facilities to supply as much of their requirements as may be necessary and possible during peak periods. Usually this is accomplished as part of the curtailment procedure.

Curtailability of Loads

Curtailment, of course, is a commonly used method of increasing load factor. The natural gas companies have taken on large volumes of curtailable load in order to increase the volumes of gas handled and sold during those periods when their lines were not loaded to capacity. To a very considerable extent, the economics of the industry have been based on curtailability of loads. In these times, however, curtailment has taken on a changed and new meaning. The old idea was to curtail the larger loads first because they could be reached the most quickly and probably to some extent that will have to be continued for temporary periods. However, the provisions of Order L-31 provide for curtailment first of those customers who will be least affected in their contributions to war production. Further than that, under war time pooling arrangements, curtailment schedules will be developed by regions instead of by companies' territories. Curtailment may have to be classified still further as the trend of all industry to war purposes continues.

One cannot talk about curtailment without thinking of the possibilities of voluntary curtailment by house heating customers. We are faced with the danger that some customers will attempt to supplant their curtailed allowances of house heating oil by using their gas stoves as auxiliary heating devices. No doubt, many will do this if they are not acquainted with conditions. I have such faith in the American, however, that I cannot believe that if the companies take their customers into their confidence, a great deal of help cannot be obtained by voluntary curtailment. The customers, however, will have to know first what is needed from them and second, why it is needed.

Tell Customers Via Advertising

It is only fair that customers should be told through your advertising mediums what the effect would be of this kind of heating. Vague generalities that gas is a critical material is not enough. They have been hearing that gas is good for a long time and would not distinguish that from promotional advertising. Some and possibly many with central house heating equipment could be persuaded to subject themselves to the same reduction in room temperature that is contemplated for oil heating customers in the oil-rationed areas. The time for the voluntary curtailment appeal will soon be here although many companies have already done much by promoting insulation, window stripping and other heat conservation methods.

We can generalize somewhat further on methods for increasing transmission load factor. As a general rule, for example, any productive capacity and any reserves near to markets should be preserved for peak load requirements. In fact gas can be injected for storage in such fields during off-peak periods. I know of one company that is storing gas on top of another company's gas in the second company's field and both will draw from the field in peak periods.

Generally pipe line capacity should be preserved for the serving of loads which are near the end of the line where loads near to the origin of the line may be supplied from local fields. Where transmission capacity is not the sole cause of shortages, those who have adequate supplies can contribute greatly to the overall load factor by furnishing help to those who do not have adequate supplies. The relief which may

be expected will depend upon the ability to give and the necessity to receive.

One of the most obvious methods and I hope it won't have to be extensive, is to convert large users of natural gas to other fuels which can be furnished without overtaxing other facilities.

The petroleum industry is already in the unfortunate position of having to depend greatly on this solution. The breakdown of part of the petroleum transportation as the result of submarine warfare and the addition of large new demands for liquid fuels has put the petroleum industry in the position of having to push as many of its customers as it can into the rather unwilling laps of its competitors. Probably the gas industry will be faced with having to do some of the same thing. Certainly some loads can be converted to other fuels where the conversion does not require too much critical material and where the conversion will not overtax transportation facilities. Some considerable trend towards this conversion can be seen, although some obvious cases have not yet been done because conversion takes time as well as critical materials.

Long-Term War Program

You probably will find other methods of increasing overall load factor and may find methods for increasing certain pipeline capacities. Some pooling of standby gas engine compressors would make available a number of compressors which could be used for boosters on long sections of lines.

The long-term war program of the gas industry involves not only these steps which are encompassed within the industry, but involves also the programs for steel, for coal, for oil, for transportation in most of its forms and many other programs including armament. The matter of securing oil supplies for gas customers' standby facilities was never thought of as a serious problem before but in a number of areas, an extended curtailment of natural gas is going to throw a tremendous new load on oil distributing facilities. Some of the statistics in certain areas have seemed almost appalling.

The development of the Government's part of the war program for the gas industry is well beyond the questionnaire stage. From here on the plans will stem from individual studies of supplies, of plants, and of operations. These studies in turn will be related to requirements so that the industry will produce as nearly as possible, only that which is required, directly or indirectly for war production and for essential civilian services. I feel very keenly that those of us who are working on this problem in Washington cannot know too much about your individual problems.

In spite of the public utility or so-called monopoly aspects of the natural gas business, we must recognize that competitive position has been important to individuals within the industry. This applies not only to competition among fuels but also between various interests within the industry. Competition for markets is only part of the picture. There is also the very active competition for supplies. We know both these must receive consideration even if we cannot let them stop any action needed for the war effort. We cannot mince words on this point. Some of the industry will be called upon to make sacrifices of advantages.

The existence of this dual competition for markets and for supplies will make some sacrifices doubly hard. I have in mind a rather typical case. Company A through an expensive and what turned out to be a far-sighted leasing and development program has secured a surplus supply of gas which was expected to give it a substantial leverage in order to get into Company B's market. Because of war developments, Company B has had an unexpected increase in the amount of industry in its territory. Certainly we cannot allow Company A to duplicate Company B's facilities by going to B's market. Either B must surrender its market to A along with its distributing facilities, or A must surrender its producing facilities to B, or A must supply gas to B so that B can take care of its war load. The last of these is obviously the least disruptive of the alternative treatments. Probably the management of both companies will feel a great sacrifice has been made by this solution even if the price for the gas is adjusted equitably.

Another case which may become even more common. Company C and

American Homes Organized for War

"V Home" Certificate

NATION-WIDE muster of American homes to determine the extent to which they are participating in the total war offensive and making necessary air raid precautions is being conducted on a house-to-house basis under instructions from James M. Landis, Director of the Office of Civilian Defense.

Local defense officials are authorized to award a "V Home" certificate to any home which has made such air raid precautions as are deemed necessary locally and which asserts that it has participated in certain practical measures to strengthen the war effort. These measures include conservation, salvage, refusal to spread rumors designed to divide the nation, and regular purchases of War Savings Stamps and Bonds. The "V Home" certificate is to be signed by the air raid warden or other appropriate local defense official and it is designed as a window sticker for display purposes.

At the same time the protective measures of business establishments in strategic areas are being checked. Director Landis said. This survey will include hotels, large apartment buildings, stores, shops, factories, and office buildings. An official certificate for approved business establishments will attest that "Air Raid Precautions Have Been Taken Here." It also may be used as a window sticker.

Company D are in adjoining territories and have emergency inter-connections. Both have built up what ordinarily would be considered to be curtailable loads. However, a much larger proportion of Company C's loads have been converted to war industry. The policy in the curtailment orders of the War Production Board will require Company D to curtail all of its non-essential load and deliver released gas to Company C before any curtailment of Company C's war loads can be made. In other words, the supplies of the two companies are to be pooled and curtailment met according to a combined curtailment schedule.

Mobilization Hardships

We have found cases like this where the prices of gas have been such that relatively cheap loads have not been curtailed while higher rate loads which were less essential have been sacrificed. The matter of the price of gas which has to be transferred under a combined curtailment schedule or for any other purpose is not a responsibility of the War Production Board. We are not unmindful of the fact that our requirements actually result in firming up sales that have been contracted for on a surplus basis under the existing rate and service classification schedules. However, we are not empowered to adjust the economic dislocations arising out of protecting war industries. Our ability to handle this phase of the problems is limited to a selection of that alternative solution which demands the least sacrifice. The investigation and study which that requires often is greater than that required to determine what the solutions are.

Mobilization always produces hardships on individuals. Sometimes these can be adjusted equitably and sometimes they cannot. I cannot help thinking of human beings that are in much the same position. John Doe, a bachelor, has to leave his business to his competitor who has a deferment because of dependencies. Dr. Jones has to leave his practice to a doctor the Army won't take. There are Doctor Joneses in every city and probably most villages throughout the United States who because of the obligation entailed in having the medical training must leave their practice and leave their families to struggle along on an Army salary. Even these sacrifices seem minor compared to the supreme sacrifices that John Doe or Dr. Jones might have to make.

The gas industry has an obligation by virtue of its possession of a large share of our most critical material, steel, which makes up their valuable transportation arteries. The obligation that should override many other obligations is to mobilize this steel for the war. After hearing all of the shortages that exist in so much of the country, one cannot be starry-eyed and call upon the industry to spring forward and take on new territory even though that would be a more appealing role. By and large, the industry has already taken on many new loads and the serving of these adequately and the continuation of adequate service to the older customers is not going to be easy. What appears to be the thing of greatest value to the war is the willingness to cooperate and the ingenuity and resourcefulness of you and your associates in the industry who are responsible for the operation of these facilities. The work that has been described by the speakers who have preceded me is ample evidence of this.

Lone Star Gas System's Plan Wins Approval

CORPORATE simplification of the Lone Star Gas Corp. utility system, as provided in a voluntary plan filed under Section 11 (e) of the holding company act was approved October 22 by the Securities and Exchange Commission, which held that the proposed plan will enable the applicant companies to meet the requirements of Section 11 (b).

Companies affected are, in addition to the top holding company, Lone Star Gas Co., Community Natural Gas Co., Texas Cities Gas Co., Dallas Gas Co., Council Bluffs Gas Co. and Lone Star Gasoline Co.

Lone Star under the approved plan will divest itself of all interests in, and all ownership and control of, Council Bluffs Gas Co., Northern Natural Gas Co., and the properties and businesses of Texas Cities Gas Co., located in and around El Paso and Galveston. The S. E. C. gave the corporation 150 days to file an amended plan providing for disposal of Texas Cities Gas Co. properties around those two cities. Consolidated balance sheets of Lone Star and its subsidiaries, as of Dec. 31, 1941, showed total assets of $153,357,222.

The proposed plan, in brief, provides for combining of the gas corporation and the subsidiaries now in operation in Texas and Oklahoma into two new companies to be created under the laws of the state of Texas, the sale of Council Bluffs Gas, the use of the proceeds from such sale to reduce the outstanding bank loan notes of Lone Star Gas Corp., and the distribution of the common stock of Northern Natural Gas Co., owned by the corporation, to its own stockholders as a dividend.

There's More Than One Way To Read a Meter

A CUSTOMER whose business is commercial photography turned a new trick for his trade into a meter reading stunt for The Peoples Gas Light & Coke Co., Chicago, last month. It contains the germ of an idea which might be useful in the war emergency drive to save tires, fuel and manpower.

There is seldom anyone at home to receive a meter reader at J. A. Feala's house, 1818 W. Henderson Ave. During two monthly visits of the meter man, the customer's usage had been "averaged"—which is the limit allowed for consecutive billings without a definite meter reading. A special order was issued with rather negligible results, so a letter was sent to Mr. Feala.

The letter apparently stimulated Mr. Feala's imagination, for he took one of his numerous cameras, snapped a picture of the meter dial, marked his name and address on the negative, made a print, and sent it to the company.

Now customer and company are both satisfied.

14 Million Homes Are Centrally Heated

MORE than 14,000,000 homes in the United States have central heating equipment, according to data from the 1940 Census of Housing released by J. C. Capt, director of the Bureau of the Census, Department of Commerce. Homes with central heating represented 42% of the 34,144,370 occupied dwelling units for which type of heating equipment was reported. Coal or coke was the principal fuel used for heating 54.2% of the occupied dwelling units, while wood was reported for 22.6%, gas for 11.2%, and fuel oil or other petroleum products for 9.9%.

Almost two-thirds of the 3,396,212 dwelling units reporting the use of petroleum products as heating fuel were in the New England, Middle Atlantic and South Atlantic States, where restrictions have recently been placed on the sale of these products. Steam or hot water systems furnished heat for 7,424,844 occupied dwelling units, or about one-fifth of all homes, and piped warm air systems were reported for 5,725,273 occupied units, or one-sixth of the total.

Demand and Supply . . . *of Natural Gas After the War*

By J. FRENCH ROBINSON

President, The East Ohio Gas Company, Cleveland, Ohio

Mr. Robinson during his address which made a profound impression upon his audience

This outstanding address by Mr. Robinson, chairman, A. G. A. Natural Gas Section, and a key figure in the OPC natural gas coordinating system, was presented at the Annual Meeting in Chicago.

IN a consideration of natural gas requirements and our means of meeting those requirements after the war, we should at least be grateful for that note of optimism in our proceedings which implies that there will be an "after the war," as of course there will be, and we will be ready for it. That's what we are for.

By the very nature of this subject it is necessary to look ahead. We are dealing and we have to deal with the problematical, and never was our future more confusedly problematical than it is now. The reason is that, in looking ahead as we have to do, we have to look through a war, and state as well as we can, what we see on the other side.

War a Vast Uncertainty

I have tried to practice as little pure crystal-gazing as the facts will warrant and to keep guesswork out of my calculations. However, the unescapable fact is that our feet are considerably off the ground, and, if we fail to acknowledge that truth, we would be unfair to the public trust which is imposed on us as suppliers of natural gas to the American people.

What I mean to say is, and it is said most matter-of-factly, that prophecy and speculation are a very precarious way of viewing a great and essential industry, but when no other processes of calculation are possible it is the greatest of follies to delude ourselves into a belief that we are sure of our ground.

In the sense, therefore, that knowledge of our insecurity in taking anything for granted where this war or its duration are concerned, is the first step toward a rational approach to our problem. We can at least be cautious and clearly mark with an interrogation point those factors upon which we ought to know now we cannot depend. This war is a vast uncertainty, both as to time and consequences. We must incorporate that fact in our calculations. Then, at least, if our chart is faulty we will know it is faulty and govern ourselves accordingly.

One unassailable rock we have to stand upon, that is, the known amount and extent of natural gas reserves in the United States at the present time. Known reserves of natural gas in the United States are estimated at 86 trillion cubic feet. It becomes necessary to know how much of that will be left for post-war use. This involves the war's duration, a cloudy calculation indeed. The war's duration and the as yet unmapped extent of our "war effort" are uncertainties and must be clearly marked as speculative in any calculations we make, and yet we have to make them.

Distribution of Reserves

We know, also, the geographical distribution of these reserves within the United States and the extent of the widely separated areas which can be depended upon to produce natural gas. We can add to that fact if we subtracted from the total known reserves the amounts of gas now in requirement. Luckily, too, we have a geographical chart of these requirements. We know that, unfortunately, the areas of greatest demand are areas of dwindling supply and that, in fact, the requirements of natural gas are in accelerating dislocation with regard to the sources of future supply.

I believe that another post-war fact which we can safely include in our consideration of natural gas supply and natural gas requirements after the war, is the permanence of our present economy of distribution, at least in principle. This is the economy which sets up—but does not mark off—the five natural gas districts which are now the framework of our industry's operations. They are natural divisions of supply and utilization. And they are keyed to each other, and all for each other, into a central co-ordination system which relates an entire industry to an entire nation.

The system works, despite the haste and strain of war which forged it into being, almost overnight, with imperfections which seemed like many, it is true, but were in fact marvellously few, all factors considered. Moreover, the national direction and viewpoint of a systematically co-ordinated industry, carried in its own makeup the remedies for its defects as quickly as they became apparent. Trouble appeared for correction at the proper headquarters point almost instantly with its development anywhere. Appeals and final decisions had a system for quick routing and effectiveness, and experience has served only to perfect the workings of this historically important innovation in industry.

The common saying that "many things won't be the same as they were before this war," can be accepted as true. It is also true that there will be no serious or permanent social losses due to this war. The human race isn't built that way. Wherever it finds any thing, or any way, better than the old way, you can depend on it that the new will replace the old. This is true even if a nation or a people has to go through the hell of a war to find out what is better for it. Millions of hearts will be broken, and millions of lives will be sacrificed, and those who had

"A post-war fact which we can safely include in our consideration of natural gas supply and requirements after the war is the permanence of our present economy of distribution, at least in principle. The system works, despite the haste and strain of war which forged it into being."

fortunes will be without them, through the agency of this war. But there will also be some lessons learned and, barring a complete collapse of civilization as the outcome of this war, what we have learned will be put to use.

To be concrete again, and taking 1941 as our basis, we find one of the present natural gas co-ordination districts with known reserves of natural gas estimated at 65 trillion cubic feet, or 76% of the total. Another district and across the continent from that one, is a district with 5 trillion 250 million cubic feet of known reserve natural gas supply, or 6% of the total. Yet the former district, with 76% of the known national reserve supply, in 1941 utilized only 1 trillion 300 million cubic feet, or 46% of the total annual consumption, while the latter district, with only 6% of the known national reserve, utilized 500 billion cubic feet or 18% of the national total. The answer to this problem is arithmetically and instantaneously reduced to geographical terms, and these are simple terms of transportation.

All boiled down, natural gas requirements after the war will make still more acute the problem of balancing supply and demand geographically. The machinery for this, luckily, already exists and will have been improved and perfected in the ease and speed with which it functions. Experience is doing that now. It is obvious, also, that the successful integration of our industry with other industries effecting the mutual exchange of critical materials needed, will also be retained as a profitable lesson taught by this war.

In the post-war sunshine of abundant materials for our use, we will be able to realize the potential values of natural gas to all this nation as never before. Supplies and requirements will also be better balanced within the several districts themselves. There will be a better balance of utilization itself, by which I mean the greater social usefulness of natural gas by an increased scientific study of the appliances in which natural gas is used and the purposes for which it is used. If allocations and diversions even within the household are indicated by these studies, they will have to be made for the greater good of all, and they will be made.

Seasonal Balances

Seasonal balances nationally by districts and by companies in the post-war period which we all hope we will soon emerge into, will be sought by new methods in the increased use and development of present methods. Taking the district with which I am the most intimately familiar, District Number 1 or the Appalachian area, the seasonal unbalance can be quickly gauged by one figure. This is a gap of 100,000,000 cubic feet between the present peak-day requirement of 2,600,000,000 cubic feet and the maximum available supply on any one day.

Within this district, as well as within others which are in a similar embarrassment, the discrepancy between demand and supply is at present reduced to its minimum by all the means that are known. This figure, 100,000,000 cubic feet on a peak day, is the discrepancy between supply and demand after the supply has been raised to its maximum. We are all familiar with these efforts, and we will become more and more familiar with them.

Chief of these methods of countering a peak-day shortage is, of course, off-peak storage of gas, both underground by repressuring pools that are nearly depleted and by the storage of liquefied natural gas in above ground containers. In District Number 1, the underground storage amounts to 85,000,000,000 cubic feet which can be withdrawn at the rate of 600,000,000 cubic feet per day for a few peak days. Above ground storage of liquefied gas is, of course, much less, amounting to at the present time 180,000,000 cubic feet of gas. This is in course of augmentation by the equivalent in liquid gas of 120,000,000 cubic feet of gas.

Liquefied Storage Advantages

The advantage of liquefied storage is its greater flexibility and the greater speed with which it can be made useful in the distribution lines. I wish to repeat that the 100,000,000 cubic feet of shortage on a peak day is the shortage after all such methods have been used to their uttermost, including all available consumers standby within the district.

We can look forward, also, to an increasing insistence upon the education and guidance of our consumers in the general utilization of gas, not alone for the purpose of greater customer satisfaction in the use of our commodity, but for the purpose of economical and, hence, gas conservation purposes as well. This will amount, I

"House heating with gas had only begun to strike its stride when this war befell us. Our people in America will never give up this priceless advancement in living."

believe, in time to a systematic control, through education, of the ways in which natural gas is to be used.

Now, I think, we are compelled to enlarge our vision of natural gas requirements, and predict that, after the war, the advantages of natural gas as the perfect fuel will not be so simply calculated in terms of present or past localities of utilization. It is true that the requirements of those communities which have been built up around natural gas as a fuel will continue to increase and be met by an improved system of national distribution patterned

"Both supply and requirements of natural gas will be vitally affected by this war through the enforced practices of conservation, in every single phase of the industry, from production clear through to increased efficiencies of utilization."

after the present co-ordination plan. But it is also probable enough to demand inclusion in any post-war consideration, that the advantages of natural gas will be extended to new communities, new markets, new forms of utilization. House heating with gas had only begun to strike its stride when this war befell us. Our people in America will never give up this priceless advancement in living. There is no reason why they should. Everything was arrested by this war, to be sure, but to assume that everything will stay at the point of suspended development where it was when war found it, is nonsense, unless "our way of life" is to be regarded as just another slogan, and "freedom" written down to merely a choice between governments. People, I think, will continue to be people, and things will always remain things.

War Depletes Gas Reserves

War, of course, will play havoc in the depletion of our national reserves of all resources, and gas can be no exception. We can't eat our cake and have it too, and what goes into war we can't use to live with, for war is a killing business. Everything we do, now and for the duration, is intended to kill somebody, and obviously if we throw conservation of human lives to the winds, we can not expect to be held for conservation of material things.

Both supply and requirements of natural gas will, however, be vitally affected by this war through the enforced practices of conservation, in every single phase of the industry, from production clear through to increased efficiencies of utilization. The nation will never recover from the terrific impact on our material resources which this war is causing. All we can do is to carefully husband what is left us. Intensification of all research and engineering and educational effort for conservation all along the line must be included in any consideration of post-war requirements and supply. The three are inseparable. By conservation I mean economical and wise use of natural gas, and this again heads up into a system of centralized authority and co-ordinated industrial efforts. Indeed, without intensive conservation effort on the part of all of us, the time will soon come when there will not be any natural gas industry, not even for war.

I have tried to discuss post-war requirements and supplies of natural gas in a factual manner and with barely more than an allusion to what is, after all, the most important fact of all, and that is the war itself. The fact is also the most pertinent one to this and every other consideration. It is useless to pretend otherwise. It is worse than folly, it is false and perhaps fatal to pretend otherwise.

Duration and Consequences

The duration of the war and its consequences will affect the whole pattern of the nation, its government, its economy and its way of living. Very definitely, I am not indulging in any rhetorical flourish of a "nazified" country and what I say is utterly without any brass band waving of certified hates and fear to spur forward the war effort. The war effort is proceeding on our part with all the energy we can put into it, and it shall.

I am assuming, also, the "victory," but I want something more than just that word to use in any calculations affecting the future of what started out, at least, to be the greatest country in the world. We are resolved that it shall be. If it should turn out otherwise, it will be our fault. To mentally jump a war which we have taken upon ourselves to fight all over the world and forever, as far as any discernible conclusion of it is concerned, is the prime mistake. It is the mistake which renders useless all our other calculations. We might just as well have stayed home.

Assuming, then, the "victory," as things stand now, we will have militarily defeated three nations, itself a task of no small proportions. Of proportions, in cold, hard, brutal fact which were entirely unguessed at by the rank and file of Americans, before they airily undertook the blood responsibility for it. Of proportions which, right now, in official pronouncement, sums up into "a long, hard war, which we are still losing." Reverses in a war are part of war. It is also certain that neither side in a war tells its people just what it is up against. At a time when truth is most needed, truth becomes illegal. At a time when people—who after all have to do the dying and paying for a war—ought to have the very clearest idea of what it is all about, are subjected to what is politely called "propaganda," or smoke screen of facts. Another generalized truth of war is that war by its very nature exalts deception to a virtue, and calls by patriotic slogans that which would be called falsehood in normal times. War transforms duplicity into a studied art. The purpose is to create a gorgeous mirage called "victory." If we are to "win" the victory, certainly it is our right and our duty to know what it is to be. You don't even buy a hat blindfolded. Why then, a war?

"It is safe to predict competition between natural gas and other fuels and forms of heat, the like of which our industry has never seen. . . . Promotional efforts will have to be stepped up in volume and vastly improved in practice."

It is not cynicism, but matter-of-fact patriotism, the kind of patriotism that really does something for one's country instead of talking about it, to practice an inquisitive, calculating policy toward this or any other way. If the arts of deception are professionally glorified by war, the compensation is to be found in an equally intensified diligence and ingenuity to avoid being fooled by those who make it a business to deceive us, if they can. Fooling ourselves is certainly the worst form of deception, and, luckily, it is the easiest to avoid. Or should be.

Very decidedly, we are interested in the duration of the war, consequences of "victory," the possibility of "defeat," and the kind of country, economics and all, that we are heading

into, and I want to lay it right on the line that the war itself right now is the one unescapable fact. I am not talking four freedoms either, I am talking natural gas which is owned by the American people and which we intend for our own use. The country and its people that we as an industry, or our descendants, will have to supply with natural gas will be the country and the people to emerge from this war. What happens to the country and the people in it during the war, will determine both the supply of natural gas and the manner of its use.

I have predicted, and it is perfectly safe to predict, that the future holds for us as the nation's suppliers of natural gas a period of intensified use of natural gas and an improved method of transportation by which the advantages of natural gas are extended to more people, and a better geographical balance between supply and demand will as a result be brought about. This, of course, is transportation.

It is also safe to predict, because it was coming about before we got into the war, competition between natural gas and other fuels and forms of heat, the like of which our industry has never seen. Luckily, the markets and the uses of gas have already expanded far beyond the single function of lighting when the incandescent lamp made its appearance, so that we can always sell our gas. But in terms of social usefulness and of the effort required to sell it, there will be points of competition as fierce as that one was. Let us face that fact; anticipate those points of attack and prepare against them with preparations to meet the attack and yield nothing.

"We are already talking of natural gas by shipload in cargo ships, exactly as if two ships were tied to the same pier and one was loaded with cotton and the other was loaded with gas."

As in the case of the war, however, let us find the truth early and hold to it steadfastly. With competition, the basic truth is that people will always replace a present way of doing anything if a better way can be found. Specifically, in the matter of gas for cooking, the application of that truth is keeping the gas range superior to any alternative cooking method. Because, I assure you, that if electrical cooking becomes better than gas cooking, even with a slight differential in cost favorable to the latter, let alone with costs comparable, people will cook with electricity where they can. The answer, of course, is alertness on our part, recognition of the facts, research, and the rapid translation of research results into marketed equipment. I think it is safe to say, also, that promotional efforts on all sides, including ours, will have to be stepped up in volume and vastly improved in practice.

Competitive Factors

We are very foolish, I think, if we deny the possibilities of other forms of heat, in addition to the competition with which we are familiar. Electricity will go after us in the kitchen with the range, and in the basement with the water heater. You will pardon me if I add, "and how!" We will be ready for it. Electricity and oil will be looking up both in domestic purposes for house heating and in industry. Competitively, even at the best, it is no bed of roses to which we can look forward. Our only speculation is, how much harder our bed will be from other causes, and I mean the war with all its consequences, than it needs to be and that we can prevent it from being.

In this matter of competition, we are always at grips with coal for house heating, and we must remember that coal combustion equipment has received a tremendous amount of research attention in the past few years with the resultant improvements which might be expected. We can look forward to more of this. We can also look forward to the fact that house heating more and more will be our mainstay for consumption in volume. Nor is it entirely out of the picture to envisage new forms of heat and new methods of using heat which is now abundant but lacks means of practical application. That the sun's heat itself may compete with us practically instead of just seasonally as now, by depriving us of our house heating load part of the year, is entirely possible. In fact, no one today should say that anything is impossible.

If anybody thinks that things are not moving fast and going places in natural gas, he should be reminded that we are already talking of natural gas by shipload in cargo ships, exactly as if two ships were tied to the same pier and one was loaded with cotton and the other was loaded with gas.

"In the post-war sunshine of abundant materials for our use, we will be able to realize the potential values of natural gas to all this nation as never before."

The explanation, of course, is liquefied gas. The mechanics of transporting liquefied gas by water are already completed. Its economy, like every other economy today, is not subject to definite chart. Naturally. Cost factors being favorable, natural gas will be transported much the same as fuel oil, the natural gas "tankers" having insulated hulls. Much more than a conjectural advantage of this transportation is the belief that unpreventable leakage by evaporation of the liquefied natural gas would furnish the motive power to propel the ship.

I think it is clear, and we all subscribe to it, that at least the framework or the principle of co-ordinating supply to the requirements of natural gas, nation-wide, will continue "after the war." The cost of gas to the consumer, speaking generally, will tend constantly to go higher. This will still further intensify both the competition offered by other fuels and our own in return. We can meet it. But the economic terms on which we meet it will be very largely determined by the course of the war as well as its outcome.

Gas Illumination

This is the time of the year when Gage and Tollner's—Brooklyn's long famous establishment for gourmets—celebrate with a fine touch. During anniversary week all illumination is from the original gas chandeliers, that during the rest of the year help create a delightful atmosphere for the enjoyment of good gas-cooked food.

The Gas Industry in War

By ERNEST R. ACKER

President, Central Hudson Gas and Electric Corp., Poughkeepsie, N. Y.

Ernest R. Acker

IT is an unusual privilege to take part in this vitally important business meeting of the American Gas Association and to discuss with you the current problems of the industry directly related to the war effort. The attitude of the industry's executives toward the war is clearly indicated by the character of this two-day meeting from which has been eliminated the periods of relaxation and entertainment formerly provided as an incentive for attendance at national conventions. The gas industry is in tune with the times and your attendance here at a time of unprecedented pressure and strain is adequate proof of the serious purpose and deep sense of responsibility with which this industry is taking its part in the war effort.

Industry Response Notable

Since the declaration of war it has been my privilege to act as Chairman of the Association's Committee on War Activities and to work closely with the various sections and committees of the Association and particularly with the Headquarters Staff in New York and Washington on many matters of importance to the industry and its war effort. In this work I have also had the opportunity to meet with the representatives of various government agencies and in all cases have been tremendously impressed with the sincerity, ability and singleness of purpose with which these men are tackling the war problems. I am convinced that by and large the men upon whom the country is depending to administer its war agencies are guided by one primary motive in their consideration of all problems—the strengthening and furtherance of the war effort. The response of the gas industry has been notable and I am confident that the industry will live up to the spirit and letter of the commitment made by President George S. Hawley to the President of the United States on December 10, 1941, when he pledged, on behalf of the Executive Board of the American Gas Association, the "full cooperation of the gas utility industry of America to our Government in the national crisis."

The Committee on War Activities is composed of only six members broadly representative of the natural and manufactured gas industries on a regional basis, and was so constituted to provide for quick decisions and prompt action in the present emergency. It is the successor to the Committee on National Defense so ably guided for two years or more by George F. Mitchell of Chicago and which was largely responsible for the excellent advance preparation of the gas industry for the actual requirements of wartime operations. The functions of the Committee on War Activities may be briefly summarized as follows:

Mr. Acker, as chairman of the Committee on War Activities and vice-president-elect of the American Gas Association, presented the gas industry's war record in this important contribution to the Annual Meeting.

1. To take action promptly in an emergency on matters originating with Government war agencies, the Executive Board or members of the industry.
2. To promote the coordination of the war activities of the several sections and general committees of the Association.
3. To consider, authorize and sponsor any war activities which may be proposed by these groups and to initiate or assign to section committees any activities which the committee believes to be essential.
4. To make recommendations to the industry and to take the necessary steps to assure their full consideration by member companies.

The committee has not attempted to pre-empt the functions of existing committees or to duplicate activities already being effectively conducted. It has received the wholehearted cooperation of the officers, headquarters staff, sections and other committees of the Association and has achieved its purpose only because and to the extent that the full facilities of the organization were available to it. The committee has little to report of its own accomplishments—it has much to report of the accomplishments of the Association as a whole.

A. G. A. War Activities

The work of the Committee on War Activities has been equally applicable to all branches of the industry with the exception of the Manufactured Gas Limitation Order and the use of oil in water gas production. The committee was not in existence as such at the time of the issuance of Limitation Order L-31 on Natural Gas which, in any event, was properly a matter for the direct consideration of the Natural Gas Section. This section promptly grasped the situation and has ably assisted the War Production Board and the Office of the Petroleum Coordinator in the administration and enforcement of the order. The committee is informed that the procedure has worked smoothly, cooperatively and expeditiously and to the satisfaction of the war agencies.

On August 25th the War Production Board issued Limitation Order L-174 applicable to manufactured gas. Prior to the issuance of this order, officials of the Power Branch of the Board held informal discussions with members of the industry, including members of the Committee on War Activities, and gave full opportunity for comment and discussion on the purposes and provisions of the order.

A Brooklyn Union Gas Company employee checks off another 50 employees enrolled in the War Bond payroll deduction plan

The order is reasonable, ably drawn, provides for suitable exceptions and appeals, and has been accepted as satisfactory by the industry.

The industry is now being asked to cooperate with the government in the promotion of fuel conservation through a public educational program. In this connection representatives of the industry, including the Chairman of the Publicity and Advertising Committee of the Association, have met with officials of the Power Branch of the War Production Board and have agreed to draft suggested advertising material for the gas industry for submission to the government agency. Recommendations as to the preparation of this material and how it will be made available to member companies were made at the meeting of the Executive Board yesterday afternoon.

The policy of the War Production Board, on appeals from the provisions of Limitation Order L-174 prohibiting sales of gas for new space heating installations, has been clearly stated in the case of several individual member companies. In the case of my own company, permission was requested to sell gas to replace oil for domestic and commercial space heating up to 200 installations. This request was based on the fact that the company's maximum daily sendout which occurred in the winter of 1939 was 75% of the company's total generating capacity and that a 20% reserve would still be available after the addition of the new space heating load. In addition, the company stated that approximately 50% of the oil otherwise required would be saved through the substitution of gas for oil burning equipment. The company has on hand the necessary equipment for 175 conversion burner installations. In a reply dated September 24, Herbert S. Marks, Acting Chief Power Branch, stated as follows:

"Your application of September 15 for relief from the restrictions upon the delivery of manufactured gas for the operation of space heating equipment under paragraph (e) of Limitation Order L-174 has been reviewed.

"We regret to advise you that on the basis of the facts set forth in your application, you are not entitled to make deliveries of gas for the operation of the 200 space heating installations specified in your application.

"We feel obliged to see that no further demands are made on existing manufactured gas plant facilities for space heating purposes, because space heating can invariably be accomplished with some other fuel, and large deliveries of gas for such a use can easily threaten the delivery of gas to war production plants during the winter periods of peak consumption."

I cite this as an individual case which may not be a precedent for other cases involving different conditions.

Early in its deliberations the Committee on War Activities approved the creation of a special committee of the Residential Section on Coordination of the gas industry with the National Nutrition Program. This activity, together with the outstanding work of our home service people has received unusually high and spontaneous commendation from governmental agencies and demonstrates clearly the value of the organization and promotional work on home service which the Association has sponsored for many years.

Salvage Program

In January of this year the committee urged the creation of a salvage bureau by the Association which was immediately established under the supervision of John West, Secretary of the Residential Section. This program was undertaken prior to the initiation of the War Production Board activity and has resulted in the exchange of large quantities of materials and equipment by member companies. Lists of surplus materials have been furnished to the War Production Board but to the best of our knowledge have not been circulated by that agency.

It is interesting to note that several companies which opposed the submission of surplus material lists in the early part of the year have recently

Pictures above and center show effective use of national advertising elements in window and billboard media by the Kansas City Gas Company. Ray T. Ratliff is advertising manager of the company

This window display by the Public Service Electric and Gas Co., Newark, N. J., Thomas H. Spain, advertising manager, follows closely the first advertisement in the "war effort" series

obtained needed materials or equipment through the use of such lists. The salvage bureau has made surveys of the availability of used turbo blowers and coal gas ovens for the War Production Board and has been instrumental in obtaining materials and equipment for several cantonments and for numerous industries producing war materials.

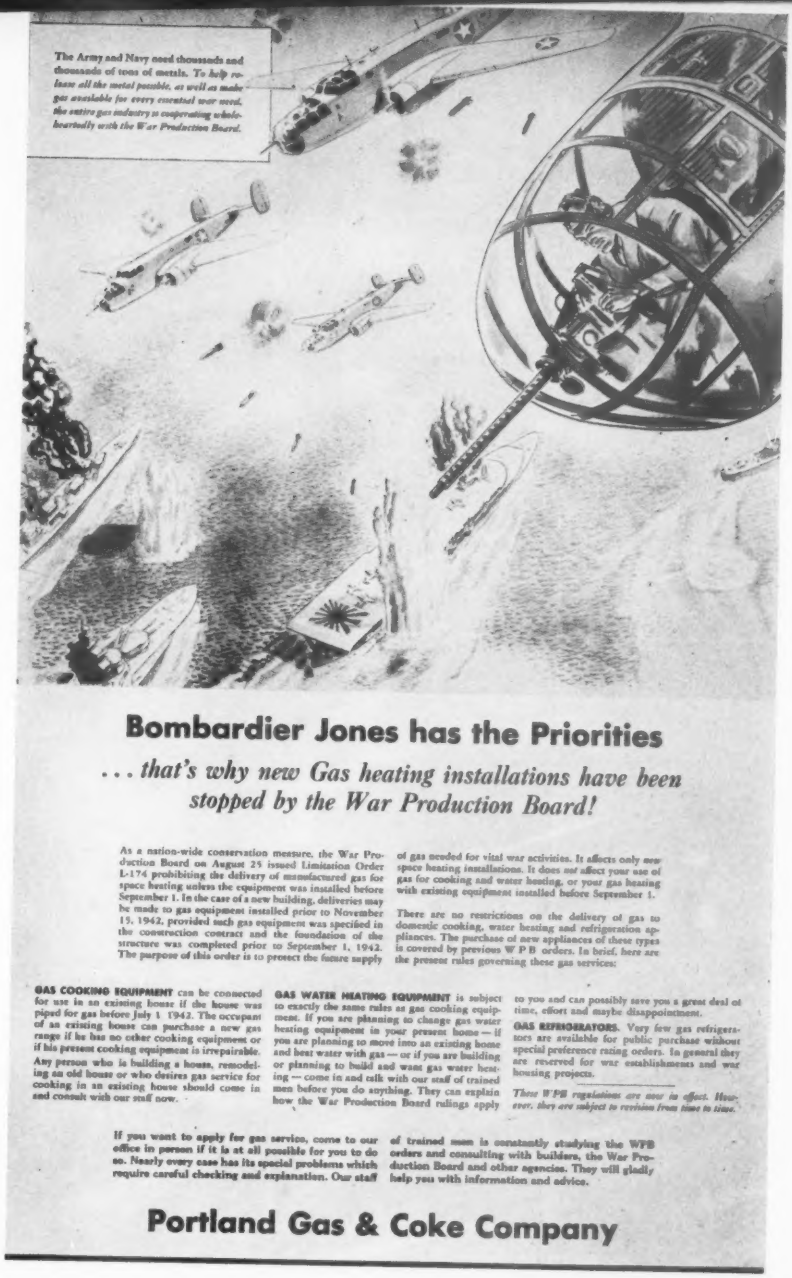
In connection with Appliance Limitation Order L-79 the Committee on War Activities requested the Residential Section to determine by survey the number of gas ranges in utilities' and dealers' stocks, with a view to appealing for release from the provisions of the order of such ranges as were not suitable for defense housing requirements. To date we have been unsuccessful in this effort but are now conducting a second survey as of September 15 at the request of the government for use in planning the future production of ranges.

Serving Housing Projects

Many gas company executives are gravely concerned with the increased intensity of the competitive activities of certain electric manufacturers with governmental agencies concerned with housing projects. We believe that their activities have already resulted in uneconomic decisions by certain federal agencies and that their representations are based on unfair comparisons and unsound reasoning. To combat this situation the committee requested the appointment of a special committee to assemble material in cooperation with manufacturers of gas appliances, as to weights of critical materials required for various combinations of utility services. Figures as to electrical installations were developed by combination gas and electric companies interested in presenting factual and defensible data. The results to date indicate that the use of proper gas equipment offers possibilities for considerable saving of critical materials in war housing projects, and the committee will shortly determine the manner in which this data can be most effectively used.

One of the outstanding accomplishments of the Association in which the committee has been involved was the publication by the Technical Section of the handbook "War Protection of the Gas Industry," which has recently been completed and put in the hands of all member companies. This publication was edited by the Headquarters Staff under the supervision of the Technical Section's Committee on War Activities and stands as the Bible of the gas industry on the emergency protection and operation of gas facilities. At the request of the Office of Civilian Defense, C. George Segeler of Association Headquarters revised a portion of the text entitled "Notes for Air Raid Wardens" for publication by the governmental agency. These notes, possibly with some changes, are now in the Government Printing Office and will shortly be ready for distribution to state and local Civilian Defense Councils. The Office of Civilian Defense has expressed its appreciation of this work.

Upon the receipt of a request from the Federal Power Commission, the Committee on War Activities approved the temporary assignment of Mr. Segeler to assist the Federal Power Commission and the Army in


The Army and Navy need thousands and thousands of tons of metals. To help release all the metal possible, as well as make gas available for every essential war need, the entire gas industry is cooperating wholeheartedly with the War Production Board.
Bombardier Jones has the Priorities
. . . that's why new Gas heating installations have been stopped by the War Production Board!
As a nation-wide conservation measure, the War Production Board on August 25 issued Limitation Order L-174 prohibiting the delivery of manufactured gas for space heating unless the equipment was installed before September 1. In the case of a new building, deliveries may be made to gas equipment installed prior to November 15, 1942, provided such gas equipment was specified in the construction contract and the foundation of the structure was completed prior to September 1, 1942. The purpose of this order is to protect the future supply of gas needed for vital war activities. It affects only new space heating installations. It does not affect your use of gas for cooking and water heating, or your gas heating with existing equipment installed before September 1.
There are no restrictions on the delivery of gas to domestic cooking, water heating and refrigeration appliances. The purchase of new appliances of these types is covered by previous W P B orders. In brief, here are the present rules governing these gas services:
GAS COOKING EQUIPMENT can be connected for use in an existing house if the house was piped for gas before July 1, 1942. The occupant of an existing house can purchase a new gas range if he has no other cooking equipment or if his present cooking equipment is irrepairable.
Any person who is building a house, remodeling an old house or who desires gas service for cooking in an existing house should come in and consult with our staff now.
GAS WATER HEATING EQUIPMENT is subject to exactly the same rules as gas cooking equipment. If you are planning to change gas water heating equipment in your present home — if you are planning to move into an existing home and heat water with gas — or if you are building or planning to build and want gas water heating — come in and talk with our staff of trained men before you do anything. They can explain how the War Production Board rulings apply to you and can possibly save you a great deal of time, effort and maybe disappointment.
GAS REFRIGERATORS. Very few gas refrigerators are available for public purchase without special preference rating orders. In general they are reserved for war establishments and war housing projects.
These WPB regulations are now in effect. However, they are subject to revision from time to time.
If you want to apply for gas service, come to our office in person if it is at all possible for you to do so. Nearly every case has its special problems which require careful checking and explanation. Our staff of trained men is constantly studying the WPB orders and consulting with builders, the War Production Board and other agencies. They will gladly help you with information and advice.
Portland Gas & Coke Company

An outstanding example of "reason why" advertising

setting up a plan for inspection of gas plants for protection against sabotage and espionage, and also to assist in the schools for inspectors conducted in various parts of the country. Our member companies have cordially cooperated in this work and reports to date indicate that company executives are much pleased with the inspections and with the suggestions received.

At the request of the committee, the Insurance Committee of the Accounting Section undertook a study of War Risk Insurance Coverage, and later, in cooperation with the Insurance Committee of the Edison Electric Institute, assembled data as to utility risks which resulted in a substantial reduction in bombing and other war insurance rates applicable to public utility property. A large part of the credit for this important accomplishment is due Reginald Fleming, Chairman of the Association's Insurance Committee.

Gas companies everywhere are using their facilities to promote the war program. This window display of The Peoples Gas Light & Coke Co., Chicago, urges women to save cooking fats for use in explosives

Manpower Shortage

It seems obvious that all companies will experience increasing difficulty in retaining the services of expert employees of draft age. A responsible representative of the Manpower Commission recently stated flatly to a group of public utility representatives that they would within the next few months find it impossible to retain the services of single men (and within one year, of married men without children) under 45 years of age, unless they could convince the Draft Boards that the services of these men were indispensable to the war effort. He further stated that the Manpower Commission will not in the future agree that any man is in a key position when a new man can be trained for the job within six months. He cautioned the utilities that all employers should begin immediately to train men, who would probably not be subject to draft, to replace those who are certain to be called within the near future.

In the meantime the Committee on War Activities has been working closely with the Association's Committee on Personnel Practices to improve the status of gas company employees with the Selective Service Board and Manpower Commission. The burden of this work with the Washington Agencies has fallen on J. D. Dingwell, Jr., of the Washington Gas Light Company, Chairman of the Committee on Personnel Practices, who has rendered invaluable service to the industry through his contacts with governmental representatives.

We are currently informed that a list of critical occupations in the gas industry is in process of preparation by the Manpower Commission, together with similar lists applicable to other industries declared to be essential to the war effort in Release No. 279. Representatives of the Manpower Commission have refused to allow our representatives to collaborate in the preparation of the gas industry list on the grounds that other industries would request the same privilege and the Commission would be swamped with industry representatives each demanding attention and prompt action. Unfortunately, some Draft Boards refuse to grant the gas industry the same status as the electric because of the absence in our case of a specific Occupational Bulletin containing a list of critical occupations. The Selective Service Board requests that such cases be brought to its attention so that the state directors involved may be properly instructed. In the meantime, the Committee on Personnel Practices is proceeding with the preparation of a list of critical occupations to be used in case the list now being prepared by the Manpower Commission requires amendment. Mr. Dingwell has been assured that omissions will be taken care of promptly after the list has been issued.

The Office of the Petroleum Coordinator for War has directed certain questions to the Association looking to the conservation of oil in water gas production through the substitution of low grade gasoline or liquefied petroleum gases for present enrichment oils or through reduction of the B.t.u. content of the gas. This matter is under the joint review of the Committee on War Activities and the Special Committee on Oil Conservation of the Technical Section. John H. Wolfe of Baltimore, Chairman of the latter committee and Vice-Chairman of the Technical Section, has submitted a reply as to the use of gasoline for enrichment purposes, after consultation with a large number of member companies. The reply indicates that gasoline can be used for water gas enrichment without insurmountable technical difficulties but points out that its use would involve serious hazards, modification of storage, pumping and piping facili-

ties, and important economic questions which cannot be solved until further information as to price, quantities available and source of supply is furnished by O.P.C.

A reply as to the reduction of B.t.u. content is now in preparation. Tests on the use of gasoline for enrichment purposes have been recently run at Rochester, N. Y., and Fond-du-Lac, Wisconsin, and a further test will shortly be run at Kingston, N. Y. The cost of 6000 gallons of straight refinery-run gasoline to be used in the test at Kingston by my own Company will be 13½¢ per gallon. The results of the tests already conducted are available through Association Headquarters.

Pending the determination of the gasoline question, the Association has received continuous assurance from the Office of the Petroleum Coordinator that crude oil would be available for manufactured gas company requirements during the coming winter, and companies have been advised to fill their storage tanks for the winter's supply as soon as possible.

Tin Conservation Measures

Based on information requested from the Consolidated Edison Company of New York on the results of their experiments with the use of 30% tin content solder, the Tin Branch of the War Production Board made inquiry of the Association's Washington representative as to whether a reduction from the 40% content now authorized for meter repair work, to 30%, was now in order. At the suggestion of the Committee on War Activities, officials of the Tin Branch were advised that the industry would immediately undertake additional tests to determine whether a 30% tin content solder could be used advantageously and that the committee would be glad to advocate amendment of the Tin Limitation Order if the results of such tests were satisfactory. The industry has been fully advised as to the formula and technique used by the New York company and the results of numerous tests have been under review by the Distribution Committee of the Technical Section.*

Companies which have used the new solder successfully and who are satisfied with its performance report that the use of the new formula requires careful training of the meter shop personnel and shows a reduction in tin usage only after operators have become thoroughly proficient in the new technique. Other companies report no success in obtaining tight joints or in reducing the total quantity of tin used —so that to date there is no unanimity of opinion and the industry is in the position with a governmental agency of being unable to reach an agreement within its own councils on a matter involving the use of an extremely critical material. I feel that this is a matter which merits the attention of the first executives of the industry, and it is my hope that further discussions at this meeting will clarify the situation and put the industry in a position to make an important contribution to the war effort. I call attention to the fact that an important executive of the WPB recently warned a meeting of public utility representatives in Pennsylvania that a year from now the restrictions under which we are now operating will seem mild by comparison with those which will be in effect at that time.

Association Headquarters is daily besieged by war agencies requesting information of every conceivable kind concerning the gas industry. In the face of these and countless other present difficulties we are extremely fortunate in having the unusually able and constructive services of our Managing Director, Major Alexander Forward.

It is important that gas company members understand that Association Headquarters takes the position, endorsed by President Hawley and the Committee on War Activities, that it must furnish to the Government war agencies any and all information requested in spite of the fact that some of it may have been furnished by member companies with the pledge that it will be kept confidential and used only in compilations. Do not be surprised, therefore, if you find that a war agency is in possession of information which you have heretofore considered as confidential. The war takes precedence over individual prerogatives!

These are the highlights of the procedure of the Committee on War Activities during the past nine months. The Committee has functioned only through the existing agencies of the Association and in its work has received the generous support and constructive help of the officers, headquarters staff, sections, committees and all individual and company members upon whom it has called for assistance. It faces another Association year with the firm resolve to use its full energy, resource and determination in the furtherance of the war effort.

Even the children are being trained in food preparation and nutrition classes. This group of youngsters can make a real contribution to national health and morale

* See article by C. P. Xenis and A. F. Kochendorfer, pp. 340-342, A. G. A. MONTHLY, October, 1942.

Advertising Explains War Restrictions

WHEN the War Production Board placed restrictions on new gas connections, the Houston Natural Gas Corporation, Houston, Texas, not only mailed letters to prospective gas customers urging them to consult the company before buying or installing gas piping but also ran forthright advertisements telling why the company could not take on new business.

One of the ads, illustrated with sketches of tanks, carried the punch line—"IF the government hadn't asked us to discontinue making new gas connections—these tanks might never have rolled out to WHIP THE AXIS!" Copy points out that "total gas connections made by the Houston Natural Gas Corporation require more than 400 tons of steel and cast iron." This metal, the ad explains, "converted into war production, is the equivalent of 14 of Uncle Sam's widely heralded M-4 medium tanks, known in army circles as the 'General Lee.' What's more, there would still be enough metal left over to meet the requirements of army rifles for a battalion of American soldiers."

Succeeding paragraphs state the company's regret at any inconvenience and remind the customers that it is their patriotic duty to keep present gas appliances in first class condition.

This type of advertising is doing a big job.

Our Mistake

A MISPLACED decimal in the article "Runs Car with Natural Gas" which appeared in our October issue boosted the potentialities of gasoline to unbelievable proportions. The article stated that W. H. Thornton of the Northwestern Utilities, Ltd., Edmonton, Alberta, "is able to make 1000 cubic feet, equivalent to 1 gallon of gasoline, run his car for 160 miles." It should have read "10 gallons of gasoline."

Sir Francis Joseph Gets High Post, Aids U. S. Troops Abroad

SIR FRANCIS JOSEPH, BART, president of the Society of British Gas Industries, has been elected a director of the United Kingdom Commercial Corporation and appointed acting chairman of the corporation during the absence of Lord Swinton in West Africa.

This organization was created by the government to handle pre-emptive purchases, on behalf of the United Kingdom, the Dominions and their Allies, of stores and commodities other than munitions. Its operations are worldwide and are parallel and cooperative with the operations of its American counterpart in New York. The appointment to which Sir Francis has been named is regarded as one of the most important outside the political ambit of the Ministry.

Sir Francis' many friends in the United States will be gratified at this recognition to one who has been a source of great inspiration to them. Only recently, he addressed a letter to George S. Hawley, president of the American Gas Association, filled with glowing accounts of American activity in Britain and asking members of the gas industry in the Armed Forces to get in touch with him.

His heartfelt interest in making American troops abroad feel at home is shown by the following letter which was published in a Manchester, England, newspaper:

"The other evening I met a group of American troops who were standing in Piccadilly Circus. They looked a little lonely, so I stopped and asked them how they were getting on.

"An American N.C.O. said: 'This is a lonely burg for boys like ourselves. Millions of people seem to be passing by. We heard you were shy, but we had no idea that we would feel so homesick in London. Can you tell us where we could have a bit of companionship?'

"After giving them some advice about where to go, and realising that they didn't want to be told anything about theatres or cinemas, I left them, but not with very great satisfaction to myself.

"It is so difficult for an individual to stop American soldiers and ask them questions. They might think we were trying to get information.

"Yet the question is, what can we do to make them feel at home? We see them in the streets of London. Nearly everyone, and especially the mothers of Britain who are thinking of their own boys in the Services, are just aching to do what they can for our American cousins.

"May I make one suggestion? Whenever we see members of the American Services standing about our cities, let us go up to them and say: "Is there anything I can do to help you?"

"Let me give an illustration of how they treat our boys on the other side. A British naval vessel arrived at an American port. A large number of the crew were given leave. An S O S was sent out by a committee to some hundreds of American girls, and, within an hour or two, they came down to a dance hall where our boys were being entertained.

"There was no shyness about the American young ladies. A band was present and our men had the time of their lives.

"We may not be able to do this in this country, but let us do our best. Let people make suggestions as to how this can be done over here. Believe me, it is wanted."

Pipe Line Extension

THE Federal Power Commission announced Oct. 6 its issuance of a limited certificate of convenience and necessity to the Panhandle Eastern Pipe Line Company, Kansas City, Missouri, for the construction of a 16-inch pipeline about 17 miles long extending from a point on the 22-inch main line of Panhandle's wholly owned subsidiary, Michigan Gas Transmission Corporation, in Lucas County, Ohio, to the 16-inch line of The Ohio Fuel Gas Company in the vicinity of Toledo, Ohio.

Construction of the new interconnection will relieve the threatened shortage of natural gas in the Appalachian area first reported in a survey made by the Federal Power Commission for the War Production Board early this year. Estimates of the amount of gas to be delivered through the new line range as high as 10 billion cubic feet per year.

The Commission's action follows a hearing on the conflicting applications filed by Panhandle Eastern and The Ohio Fuel Gas Company. The War Production Board has stated that the interconnection is essential to assure adequate supplies of gas to war industries in the region served by Ohio Fuel Gas.

Fire Causes

GAS and gas appliances ranked far below comparable products as a cause of fire losses, according to "Facts About Fire," a recent publication of the National Fire Protection Association. Here are some interesting figures estimated from State Fire Marshals' reports for 1940:

Cause	*No. of Fires*	*Loss*
Electrical	55,000	$26,000,000
Chimneys, flues (defective)	58,000	15,000,000
Smoking	87,000	14,000,000
Defective heaters ...	19,000	8,600,000
Hot ashes, coals	16,000	2,500,000
Oil burners	7,000	2,000,000
Gas and appliances ..	4,000	1,900,000

Many other causes of fires are listed, with the "Unknown" category accounting for 78,000 resulting in loss of $300,000,000.

'Tis Music

(From Editorial in Electrical World for Oct. 3)

"The gas people are organized to fight electricity wherever government construction is involved. This summer it moved to Army camps when an official of the non-ferrous metals section, WPB, in reply to a letter from a gas-range manufacturer, stated: 'We agree that coal, wood and gas fire cooking equipment is more economical to strategic materials than electric cooking.'" * * * *

"Why does the electrical industry let the gas people get away with such things? Why hasn't the industry been more alert with these uninformed Washington agencies?"

War Transportation . . . *O. D. T. Order 21 and Its Effect on Public Utility Fleets*

By LINN EDSALL

Vice-Chairman, Committee on Operation of Public Utility Motor Vehicles

TO understand Order 21 and its application to the utilities, it would probably be well to review briefly the history of O.D.T. and its orders.

Following its formation by order of the President, the Office of Defense Transportation issued a series of directives covering various forms of transportation. Of these 3, 4, 5, and 6, which have now been largely superseded by 17, related entirely to highway transportation and attempted to curtail greatly the use of motor trucks. In all of these orders the utilities were given special consideration and relieved of many of the restrictions imposed on the majority of trucking operations.

To the contrary, Order 21, in itself, treats the utilities in exactly the same manner as all other trucking operations. This order proposes to police the directions set up in the previous orders and it is our understanding that to fully accomplish this, Order 17 is to be broken down into a series of industry orders, one of which will be for utilities. When that is prepared, some of our operations will probably be ruled non-essential and we will be compelled to discontinue them. Others will be approved and supplies of tires, gasoline and parts will be obtainable.

In order to administer Order 21, the O.D.T. is setting up 142 district offices controlled by 9 regional offices. To these will be assigned the duty of investigating trucking operations and authorizing their continuance or requiring their discontinuance.

Presented before A. G. A. Annual Meeting, Technical Section, Chicago, Ill., October 5, 1942.

Linn Edsall, of Philadelphia, who has been appointed Chairman of the Committee on Operation of Public Utility Motor Vehicles for the next Association year

War Certificate Required

In order to operate a truck after November 15, effective date of this order, a war necessity certificate must be obtained for the truck. Applications for these certificates are now being mailed and may already have been received by some here. For fleets of trucks of 3 or more, one fleet certificate will be issued with a copy of the certificate being issued for each commercial vehicle in the fleet.

Applications are rather lengthy and contain questions concerning the nature of the business, territory covered and specific questions concerning the operation. In order to answer these questions, statements concerning experience in the year 1941 and the third quarter of 1942 are required, together with estimates of the last quarter of 1942 and the first and second quarters of 1943.

Among the questions which must be answered are the total number of miles operated or estimated to be operated by the fleet during these periods; the total number of miles operated on so-called special deliveries and call-backs. This should affect us only insofar as non-essential operations, such as merchandise deliveries, are concerned. The next question which requires miles operated under permits and exemptions is confusing. We believe that all of our construction and maintenance mileage will be added at this place, but this cannot be determined finally until instructions are received.

Another question concerns the number of trips operated. A trip, we understand from O.D.T., is the entire route of a truck, from the time it leaves the garage until it returns to the garage, whether this be all day or a short period. Then we are asked to give the average load per trip, the average capacity of the vehicle and state what the average load has been or will be in percentage of total capacity.

You can recognize that we have a problem on our hands in answering these questions. But when some of us talked to the executive assistant of the motor truck section recently, he insisted that they must be answered. If records are not available the best possible estimate must be made. And remember in making these estimates that the entire operation is subject to review by O.D.T. inspectors and estimates must be justified.

Tire Data Asked

We are also asked questions about our tires. How many new tires of each size do we have on hand? How many unused retreaded tires do we have on hand? What is the mileage run by the tires on our wheels or any used tires that we may have in stock? An estimate must be prepared of this if no figures are available. It is hard to say just what use O.D.T. will make of this data. Your guess is as good as mine.

We also list on the applications all

the vehicles owned, together with the manufacturer's number, the state in which they are registered, make, year model, rated capacity, type of vehicle, and the body type. Certificates must be obtained for all licensed commercial vehicles; not only trucks, but trailers, tool carts and other equipment designed to be drawn by trucks. There is some question at the present time whether certificates are necessary for special equipment which may be drawn by truck, but is not licensed as a vehicle.

Tire inspections are required, a minimum of six times a year. The original plan was that these inspections should be made by O.P.A. inspection stations at a cost of 75 cents to $2. per tire. This would mean in the neighborhood of $15,000 per year for a fleet of 500 trucks. We have hope, however, of being relieved of this expense, possibly by being permitted to make our own inspection.

A copy of the certificate is supplied to be carried in each vehicle and on the reverse of this must be posted weekly the gasoline consumption, the mileage and a record of any tire purchases. The date of the 60-day tire inspection must also be recorded on this card. The vehicle cannot operate unless this certificate is carried with it.

600 Vehicles in One Company

You can see that all of us have a job on our hands to prepare these applications and maintain proper records of our operations. In our company, with approximately 600 commercial vehicles, we have felt it necessary to employ a high grade clerk for this job alone. He is already working on the preliminaries of the applications.

In thinking of this 21 Order and its restrictions, we must realize that in the operation of trucks by the utilities, we have received at all times special consideration from O.D.T. If you could have heard, as I have, discussions of the problems in truck operation which have faced dairies, bakers, department stores, laundries, newspapers, and other businesses, whose use of trucks is primarily for the distribution of products, you would realize just how lucky we have been. These distributors of materials have been compelled to reduce mileage 25% in their eligible activities and to discontinue many other activities, so that in many cases, required mileage reduction had approached or exceeded 40%. Newspapers, for example, whose existence depends on a series of editions, were restricted in the original order to one delivery a day to each sales point. This restriction was later modified I believe to permit three deliveries a day, in return for which the newspapers guaranteed a 40% reduction in truck mileage. You have probably noticed newspapers transported by horse-drawn vehicles recently.

Utility Responsibility

All of this we have escaped. The only restrictions we have felt in the operation of our motor vehicles have been those imposed by the O.P.A. on account of tire shortage and have affected in large measure only our passenger cars. The O.D.T. has taken our word for the fact that we have accomplished mileage reductions in our truck service and would continue to do our part in the conservation program. Now we are called upon to present data showing what we have done and unless we are able to convince O.D.T. that we really are carrying on necessary activities only and these with a minimum of truck use, we are in for trouble.

We also believe that O.P.A. and O.D.T. will work closer together in determining eligible vehicle use in the future. We know that O.D.T. is now going to tell us what truck uses can be continued and we believe the same will shortly be true of our passenger cars. Instead of being permitted to continue ineligible operations as long as we have tires for them, we will be ordered to discontinue these ineligible operations and conserve tires needed for ourselves for some other designated agency.

A bulletin received September 30 from the National Council of Private Motor Truck Owners, discussing the recent committee report on rubber conservation, says in part, "It is further stated that the gasoline rationing system will be meshed into the tire rationing program to bring the overall mileage of America's autos within the limits of the available rubber supply, with use of tires being limited to essential transportation needs of the country."

Some of the uses we have been making of tires in the utilities, which will probably be declared ineligible are as follows:

Sales supervision.
Home cooking and lighting demonstrations.
Delivery and pick-up of appliances.
Power and industrial engineering, except in connection with direct war activity and then only when public transportation is not available within half a mile.
Responding to general complaints from customers which do not involve an eligible maintenance or repair service.
Meter reading. The Assistant General Counsel of O.P.A. has this to say about meter reading: "The problem of meter reading has been given serious consideration and it is fully appreciated that some sacrifices in the speed with which such operations have previously been carried out will have to be made. However, the grave shortage of rubber that faces our nation at this time is so acute that some of even the most vital needs will be unsupplied. Inasmuch as meter reading does not involve any construction, maintenance, or repair service, it is impossible to find eligibility for such service under the regulations." Many companies are now reading meters at three-month intervals for certain classes of service, and it is expected that this practice will be approved in a Limitation Order on use of motor vehicles by public utilities which is now under consideration. Many other companies are making wide use of bicycles and public transportation. Certainly a large percentage of meters can be reached by these means.
Collections.
Delivery of bills.
High bill complaints.
Delivering checks to employees or pensioners.
Trips by executives and supervisors between Company offices where public transportation is available.
Safety activity for construction and inspection. Protective equipment can be transported for replacement and repair.
Inspection of property for insurance purposes.
All Claim Department activity.
All Legal Department use.
Engineering—except when directly connected with construction, maintenance and repair projects. No inspections.
Transportation of employees for purpose of securing rights-of-way or contacting owners of overhanging trees.
Service of minor and portable appliances. All except large fixed appliances, such as ranges, refrigerators, water heaters, furnaces, etc.
Periodic meter testing as required by state agencies.
All incidental services which do not relate to maintenance or construction.

In conclusion, I would like to repeat part of a statement William Batt, Vice-

Chairman of War Production Board, made at the annual meeting of the Pennsylvania Electric Association, about two weeks ago. He said, "If you of the utilities are failing to educate your customers to expect the discontinuance of the deluxe service which has been rendered in the past, the utilities are not doing their job, because these deluxe services are going to be discontinued. You are not going to have gasoline and tires to continue them."

Gas in the War of Metals

WHILE the building of industrial gas furnaces used in today's war production is a highly developed art, research has been equally active in all of the related phases of the war and its accompanying general industrial effort. This is indeed a war of metals—and without heat treating, metals could produce little from the foundation of machine tools on through to the final shell. Research, and only research, has made that tremendous accomplishment possible."

"The excellent work done during the past years by the research engineers of the gas industry, and their state of preparedness when the call of this emergency came, is one of the most dramatic and satisfying phases of America's production program. Like the world's famous message, 'The Marines have landed and have the situation well in hand,' the response of the gas research men was equally historic, 'They had already landed, the emergency has been met and the situation is in hand.' "—HENRY M. HEYN, Surface Combustion.

Patriotic Calendar Offered Utilities

SAMPLE copies of a 1943 patriotic calendar in four colors are being mailed to gas companies by the Eldredge Company, Morgan Avenue and Devoe Street, Brooklyn, N. Y., producers of former calendars for the utility industry. On the reverse side of the calendar appears text entitled, "How to Make Your Gas Appliances Last for the Duration." This material is taken from the American Gas Association's bulletin, "Uncle Sam Wants it to Last."

The main illustration of the calendar entitled, "Our America" depicts a group of young American boys and girls saluting the American flag. The calendar sells for 6¾ cents each in quantities of from one thousand to 5000 copies, and six cents each in quantities of from ten thousand to twenty-five thousand copies. Envelopes are furnished separately at $8.75 per thousand. All correspondence should be directed to the Eldredge Company.

Periodic Testing of Meters

Table showing the length of time gas meters may remain in service in the several states where Public Service Commission rules provide for the periodic testing of meters, including all changes to date brought about by the war emergency.

Prepared by

LUIS HILT, Librarian

American Gas Association

Alabama	5 years
Arkansas	5 "
*California	10 "
Colorado	5 "
†Connecticut	5 "
Dist. of Columbia	6 "
Illinois	7 "
‡Indiana	7 "
‡Kansas	7 "
Kentucky	5 "
Maine	5 "
*Maryland:	
Up to 300 cu.ft. per hr. capacity	14 "
300 to 1500 cu.ft. per hr. capacity	10 "
Over 1500 cu.ft. per hr. capacity	7 "
Massachusetts	7 "
*Michigan:	
Old ruling waived for the duration (old rule—10 years)	
Missouri	7 "
Montana	5 "
‡New Hampshire:	
Up to 250 cu.ft. per hr. capacity	7 "
Over 250 cu.ft. per hr. capacity	2 "
New Jersey	6 "
New Mexico	7 "
New York	7 "
North Carolina	5 "
North Dakota	5 "
Oklahoma	5 "
Oregon: No provision for periodic meter tests	
Pennsylvania	5 "
South Carolina	5 "
Utah:	
Tin case—Up to 400 cu.ft. per hr. capacity	7 "
Others—Up to 200 cu.ft. per hr. capacity	6 "
200 to 600 cu.ft. per hr. capacity	4 "
600 to 1500 cu.ft. per hr. capacity	3 "
Over 1500 cu.ft. per hr. capacity	2 "
Vermont	7 "
Washington	5 "
West Virginia:	
Up to 1000 cu.ft. per hr. capacity	5 "
Over 1000 cu.ft. per hr. capacity	2 "
Wisconsin:	
One of two options:	
(a) Each meter to be removed and tested every 4 years	
(b) Each meter to be removed, tested, opened and all parts tested and repaired every 8 years.	

The Commissions of these states have not prescribed general rules and regulations:

Arizona	Ohio	Virginia
Georgia	Rhode Island	Wyoming
Idaho	Tennessee	
Louisiana	Texas	

*War emergency extension for the duration to terminate 6 months thereafter.
†Recently modified for certain companies as a war emergency measure.
‡1942 revision of Commission rules.

Association Awards . . . *Individuals Honored for Gas Industry Achievements*

Awards for notable achievement in the gas industry during the past year were presented at the General Luncheon, Tuesday, October 6, during the Annual Meeting of the American Gas Association in Chicago as follows:

HEPBURN WINS MUNROE AWARD

HIGHEST honor within the gift of the American Gas Association, the Charles A. Munroe Award, was conferred on W. M. Hepburn, vice-president of Surface Combustion, Toledo, Ohio for having made the most outstanding recent contribution toward the advancement of the gas industry. Consisting of a substantial financial acknowledgment and engrossed certificate, the award was made to Mr. Hepburn for his outstanding achievement in translating gas service in industrial utilization equipment.

Among the developments which have come under Mr. Hepburn's direction and bear the imprint of his ingenuity and sound engineering ability are diffusion combustion, continuous gas carburizers, DX gas atmosphere, gas preparation machines, walking beam and a wide variety of material handling mechanisms on furnaces of the walking beam type, one-way soaking pits, normalizing for full finished automobile sheets for deep drawing, bright annealing of both ferrous and non-ferrous metals, radiant tubes and convection furnaces.

These and other contributions by Mr. Hepburn to the art of industrial gas utilization have been among the more important reasons why industrial gas was in a position immediately to carry its share of the load in war production factories and will enable gas to continue to be an important factor in war production for the duration.

Mr. Hepburn was graduated from Cornell University in 1911 with a degree of Mechanical Engineering. For the next four years he was employed by The United Gas Improvement Company and in 1915 joined Surface Combustion as test engineer. He remained in this capacity for one year when, as a member of the 7th Regiment, New York, he saw service on the Mexican Border from 1916 to 1917.

W. M. Hepburn receiving the Munroe Awards from President George S. Hawley. President-Elect Arthur F. Bridge is seated at right

Ernest R. Acker, center, presenting the Beal Medal to R. E. Kruger for his outstanding technical contributions. President Hawley may be seen in the background

During the World War he served from 1917 to 1919 as Captain in the 112th Heavy Field Artillery of the 29th Division. He rejoined Surface Combustion in September 1919, serving in the engineering and sales departments. He was made vice-president of that organization in 1924 and in 1927 was elevated to vice-president in charge of engineering, in which position he has continued. From 1926-1927 Mr. Hepburn was highly influential in helping organize research activities in connection with the program sponsored by the American Gas Association.

The Chas. A. Munroe Award Committee consisted of: D. A. Hulcy, president, Lone Star Gas System, Chairman; F. H. Lerch, Jr., president, Gas Companies, Inc.; James F. Pollard, president, Seattle Gas Company.

BEAL MEDAL AWARDED TO KRUGER

R. E. KRUGER, superintendent of gas manufacturing of the Rochester Gas & Electric Corporation, Rochester, N. Y. received the highest technical recognition in the gas industry when he was awarded the Beal Medal for contributing the best technical paper to meetings of the Association throughout the year.

The award was presented by the donor, Ernest R. Acker, president of the Central Hudson Gas & Electric Corporation, Poughkeepsie, N. Y., representing the family of the late W. R. Beal who established the award in 1897. It consists of a bronze medal and substantial cash payment.

The paper for which Mr. Kruger was so singularly honored is entitled, "Interesting Developments Concerning the Saving of Gas Oil By Mixing High B.t.u. Coke Oven and Blue Gas," and was published in full in the October issue of the A. G. A. MONTHLY.

In behalf of the Beal Medal Award Committee, D. P. Hartson of Pitts-

Inset left is Joie Kammer, of New Orleans, first prize winner in the McCall Home Service Contest. Florence Matheny, of Monrovia, Calif., second prize winner, is shown above receiving her award at the General Luncheon during the Annual Meeting in Chicago. Third prize winner, Jeannette Campbell, of Minneapolis, is pictured at right

burgh, chairman of the committee, declared that "Mr. Kruger's paper, outlining savings in operation, particularly in fuel oil, was very timely and a most distinctive contribution to the progress of the industry."

Mr. Kruger joined the Rochester Gas & Electric Corporation as cadet engineer in 1916 following his graduation from the University of Rochester with the degree of Bachelor of Science. His entire business career has been with the Rochester utility, his present position being superintendent of gas manufacturing. Mr. Kruger is a member of the American Chemical Society, Rochester Engineering Society, Rochester Chamber of Commerce and American Gas Association.

McCALL'S HOME SERVICE AWARDS

THREE directors of home service departments of gas utility companies received the McCall's Magazine Awards for making the most outstanding contribution to the advancement of better living in the home through the promotion of domestic gas appliances and equipment.

First prize of a $100 War Bond and an engraved plaque went to Joie Kammer, home service director, New Orleans Public Service Inc., New Orleans, La. Second prize of a $50 War Bond and a framed illuminated parchment was awarded to Florence Matheny, home service director, Southern Counties Gas Company, Monrovia, California. Third prize of a $25 War Bond and a framed illuminated parchment was won by Jeannette Campbell, home service director, Minneapolis Gas Light Company, Minneapolis, Minn.

The contest was open to all home service departments in this country and Canada. Contestants were required to submit papers of 2000 words or less covering the work of their home service departments, divided as follows: aim of department, training of personnel, community activities, increase in scope of activities, and accomplishment of aim.

The Jury of Awards consisted of B. A. Seiple, vice president, Jersey Central Power and Light Company, Asbury Park, N. J.; W. E. Bolte, manager of new business department, The Brooklyn Union Gas Co., Brooklyn, N. Y.; Hall M. Henry, assistant to the president, Negea Service Corp., Cambridge, Mass.; R. B. Denhardt, district manager, Central Hudson Gas and Electric Corp., Newburgh, New York; and R. E. Williams, new business manager, Binghamton Gas Works, Binghamton, New York.

WIN MILLION MAN-HOUR AWARDS

ONE division of the Oklahoma Natural Gas Company, Tulsa, Okla., and five divisions of The Ohio Fuel Gas Company, Columbus, Ohio, received merit awards for their outstanding safety records. The awards were presented for achievements in accumulating one million or more man-hours without a disabling injury accident. Recommended by the Accident Prevention Committee and approved by the Executive Board, the certificates were presented by President George S. Hawley.

The award to the Oklahoma Natural Gas Company was made to the Oklahoma City district of that company. The awards to the Ohio Fuel Gas Company were presented to the Elyria, Toledo, Northern Compressor Division, Columbus; Distribution Department, District No. 5, Mansfield; and the Southern Compressor Division, Columbus.

Dallas Gas Scores in Safety Contests

SCORING the "lowest accident rate" in its particular classification of public utilities, Dallas Gas Company, Dallas, Texas, won top place in its group in the fifteenth annual public utilities safety contest for 1941-1942. The company was awarded a trophy at the National Safety Congress in Chicago, October 27-29.

Dallas Gas has won this first-place trophy five years out of the last six. The company's frequency rate of disabling accidents per million man hours of work was 3.24.

George W. Martin, Superintendent, is safety supervisor.

William A. Root Dies

WILLIAM A. ROOT, assistant treasurer of the Consolidated Edison Company of New York, died Sept. 30 at his home, 145 Benson Street, Bronx. He was fifty-eight years old.

Mr. Root had been assistant treasurer of the company since 1936, when the Bronx Gas and Electric Company, of which he was treasurer, was merged with Consolidated Edison.

He had served on committees of the American Gas Association, the National Electric Light Association and the Purchasing Agents Society of New York.

Surviving are his wife, Mrs. Martha Campbell Root, and his parents, Mr. and Mrs. William G. Root, of Havana, Cuba.

Wade H. Johns Dies

WADE H. JOHNS, who was commercial manager of Public Service Electric & Gas Co. at New Brunswick, N. J., for many years, died September 25 in Hartford, Conn., where he had gone to recuperate from a heart ailment. He was 68.

Mr. Johns had been with Public Service since 1914. He retired on pension September 21.

He was a member of the American Gas Association.

Institute of Gas Technology Expands

THE Institute of Gas Technology, located at Illinois Institute of Technology, Chicago, has opened its second academic year with three new staff appointments and ten new fellows, Director Harold Vagtborg has announced. New appointments to the staff are Dr. F. W. Sullivan, Jr., technical director, and A. D. Singh and Orin D. Cunningham, research associates.

Dr. Sullivan's appointment was announced in a previous issue of the A. G. A. MONTHLY. Mr. Singh has been research assistant in chemical engineering at the University of Illinois for the past ten years. He has also served as technical adviser to Chicago's Department of Smoke Inspection and Abatement. He holds B.S. and M.S. degrees from the University of Illinois.

Mr. Cunningham holds B.S. and M.S. degrees from Northwestern University and Montana, respectively. He was formerly on the research staff of the Reilly Tar and Chemical Company in Indianapolis.

New fellows and the institutions from which they were graduated are: Willard M. Dow, Colorado School of Mines; Roy C. Feber, Jr., University of Nebraska; Alan E. Florin, Lawrence College; W. Madden Gregory, Vanderbilt University; William Johnston, University of Texas; Richard A. Nevill, Texas A. and I.; Thomas L. Pelican, Colorado College; Leonard E. Savory, University of Denver; John W. Selph, Jr., Vanderbilt; and Erwin R. Strong, Jr., Texas A. and I.

The Institute is the only school in America offering a four-year program of specific training in gas technology, leading to a Ph.D. degree, solely to appointed fellows. Research work is separate from but correlated with the educational program and includes several new projects, to be handled by the growing technical staff. Increases in equipment are also being installed to increase the laboratory space by approximately fifty per cent.

Under the supervision of Dr. Julian F. Smith, technical librarian, the Institute library has grown to nearly fifteen hundred volumes during the summer.

Ancient Gas Machine Scrapped by Library

WHEN the Huntington Free Library was opened in 1891 at what is now 9 Westchester Sq., the Bronx, N. Y., oil lamps and candles didn't illuminate the reading room satisfactorily, so Collis P. Huntington installed a gas-making machine in the cellar to light the place properly.

The old machine, which weighed well over a ton, operated on a clockwork principle with heavy weights which descended into a well and had to be wound up on a windlass every day. It served until central town gas came in, but for more than 40 years it has gathered dust in the basement.

Today, it lies in pieces, waiting for the salvage collectors to pick it up and send it on its way to war. It's been turned in for scrap.

Black Promoted

J. L. C. BLACK has been appointed manager of the Anderson Gas & Utilities Company, Anderson, S. C., a subsidiary of Consolidated Utilities Corp., effective October 15.

A native of Anderson, Mr. Black has been sales manager of the company for the past 10 years.

At the same time, E. C. Carson, plant foreman, was named superintendent of the gas department.

Philadelphia Co. Head, F. R. Phillips, Dies

FRANK REITH PHILLIPS, Chairman of the Board of the Philadelphia Company & Subsidiary Companies, died on October 23, at his summer home at Valley Forge, Pa., after a short illness following an operation on September 30.

Mr. Phillips retired from the presidency of the Philadelphia Company on January 20, 1942, following more than 32 years of service with the company. He was a native of Cleveland, Ohio.

Following graduation from secondary school, Mr. Phillips entered the Case School of Applied Science, where he studied engineering subjects, later supplementing this with three years of law at Adelbert College, now Western Reserve University, Cleveland. While studying engineering, he was apprentice engineer in Hull Design for the Cleveland Shipbuilding Company.

After completing his education, Mr. Phillips became master mechanic of the Cleveland City Railway Company. Following this, he was connected with other utility companies, going to Pittsburgh in the fall of 1909 to assist in the development of the street railways in that city. He pioneered in the development of the low-floor, center-entrance car, so successful in present-day street railway operation. From 1909 to 1926, he was associated with traction companies in various executive positions.

On September 1, 1926, Mr. Phillips was elected vice-president and general manager of the Duquesne Light Company and its subsidiaries. In April 1928, he was elected vice-president of the Equitable Gas Company and its subsidiaries. In May 1929, he became senior vice-president of the Philadelphia Company and president of its subsidiary companies. And in April of 1931, he was elected to the presidency of the Philadelphia Company and subsidiary companies.

Sales Organization Seeks Ways To Aid Nutrition Program

Field and staff representatives of Servel, Inc., attending the company's annual conference in Evansville, Indiana, October 12-14. Discussion centered largely on what members of the former sales organization could do to promote government-recommended programs for conservation and nutrition, which Servel has been supporting with the aid of the gas industry. It was the company's first conference since the factory had been converted entirely to war production

Personal AND OTHERWISE

Edward M. Borger Joins Field Service as Ambulance Driver

Edward M. Borger

EDWARD M. BORGER, president of The Peoples Natural Gas Company, Pittsburgh, Pa., has been granted a leave of absence to join the American Field Service, the board of directors of the company announced recently. Mr. Borger will sail in the near future to join a unit of the Field Service abroad, with which he expects to serve as an ambulance driver.

The American Field Service, founded in France in 1914, has performed its relief activities in virtually all the theaters of action in the present war and is now operating with the American, British and Free French troops in the Middle East.

John J. Jacob, Jr.

John J. Jacob, Jr., of Brentwood, executive assistant to Mr. Borger, has been elected a vice-president and manager of the company, the board also announced. S. C. Preston, vice-president of the company since 1936, continues in that office.

Mr. Jacob joined Peoples Natural Gas in 1922 as a member of the civil engineering staff, and was later promoted to chief civil engineer. He was elected a director of the company in 1938 and became executive assistant to the president in 1939.

J. French Robinson, former president of Peoples Natural Gas Company and now president of East Ohio Gas Company, Cleveland, was elected a director.

Mr. Borger succeeded Mr. Robinson as president of Peoples Natural Gas Company in November, 1940. He began to work for the company as a stenographer in 1918. On completing his law studies at Duquesne University he moved up into the legal department. In 1935, then aged 34, he became general counsel for Peoples Natural Gas Company, Hope Gas Company, New York State Natural Gas Corporation and affiliated companies.

Mr. Borger was born in Sewickley, Pa., in 1901. His home is on Beaver Road, Sewickley. He is unmarried.

Celebrates 40 Years in Public Utilities

Guy W. Faller

GUY W. FALLER, president and general manager of the Public Service Company of Colorado, on October 12, celebrated the 40th anniversary of his career in public utilities.

Since 1902, when Mr. Faller left a Navy career to become associated with public utilities, his life and work have been closely associated with Denver, Colorado, and the west. He has been active in many civic and fraternal organizations.

Mr. Faller was born in Fort Freedom, Wisconsin, April 16, 1878; was educated in Baraboo, Wisconsin, public schools and was graduated from the U. S. Naval Academy with the class of 1898.

Serving with the Navy from 1894 until late in 1902, Mr. Faller participated in the Spanish American War, Philippine Insurrection, and the Boxer Rebellion. In October, 1902, he became associated with the Madison (Wisconsin) Gas and Electric Company as operating engineer.

Mr. Faller married Celia M. Astle of Sumpter, Wisconsin, in 1905. They have a son, Donald, who is a Lieutenant in the U. S. Army and a daughter, Alice.

From 1904 until 1913 he was an official of the Denver Gas and Electric Company and from 1913 until 1923 he was associated with the Amarillo Texas City Light and Water Company and the Amarillo Street Railway Company. In 1923, he returned to Denver as assistant manager of the Denver Gas and Electric Company. He became vice-president and general manager of the Public Service Company of Colorado in 1934 and president of that company in 1940.

Major Tappan Now in England

Major Tappan

ALAN P. TAPPAN, vice-president, The Tappan Stove Co., Mansfield, Ohio, recently took leave from his company to accept a commission as Captain in the Air Service Command of the American Air Force. Since that time he has been advanced to the rank of Major and is now on duty in England.

A veteran flying instructor in the first World War, Mr. Tappan has been active for many years in the Tappan organization and has served as chairman of a number of committees of the American Gas Association and the Association of Gas Appliance and Equipment Manufacturers. He has been exceptionally able in the service of the gas industry.

Machold Heads Niagara Hudson Corp.

EARLE J. MACHOLD has been elected president and a director of Niagara Hudson Power Corporation, succeeding the late Alfred H. Schoellkopf.

Mr. Machold has been closely identified with the operations of the Niagara Hudson System for the past twelve years as counsel for the companies. He was a partner in the law firm of LeBoeuf, Machold & Lamb of New York City from 1930 to date and prior to that time was associated with Attorney Charles A. Phelps at Watertown, New York.

Named WPB Consultant

L. J. Willien

L. J. WILLIEN, chief gas engineer, Public Utility Engineering and Service Corp., Chicago, has been named consultant on manufactured gas, Power Branch, War Production Board, on a part-time basis. Mr. Willien's headquarters will continue to be in Chicago

Mr. Willien has been active in the American Gas Association for many years and has made many outstanding contributions to its technical meetings. He is a holder of the coveted Beal Medal and appeared on the Technical Section program during the annual meeting in Chicago, October 5 and 6.

Deely Succeeds Bolte Who Joins Service

JAMES J. DEELY, formerly domestic sales manager of The Brooklyn Union Gas Co., has been appointed acting manager of the New Business Department.

Walter E. Bolte, manager of the department, has been called to Washington to take a position with the Army Engineer Corps in which his knowledge of fuels and their applications will more directly serve the war effort.

Mr. Deely was graduated from the University of Notre Dame in 1930 and entered Brooklyn Union on August 11, 1930, as a house heating salesman. He became house heating supervisor on April 1, 1934, retail sales supervisor on August 1, 1938, and domestic sales manager on April 1, 1941. His appointment as acting manager was effective September 1.

Major Weber Reports for War Service

WILFRED H. WEBER, assistant engineer of distribution, The Brooklyn Union Gas Co., has reported for active duty with the Army with the rank of Major.

Major Weber saw service in the first World War, was wounded in France, and later attended West Point, from which he was graduated in 1923. He subsequently joined the National Guard and was a captain in the 14th Regiment at the time the guard was federalized.

The Distribution Department engineer will be Brooklyn Union's third major. Others holding that rank are James A. Proude and Herman Karl Merker.

Warns of Post-War Competition

John A. Robertshaw

A WARNING to gas appliance manufacturers to be prepared to meet post-war competition of an entirely new and unique character was sounded October 6 by John A. Robertshaw, following his re-election as Chairman of the Manufacturers' Section of the American Gas Association. The wartime development of plastics, glass, and new metals introduces new basic materials which, Mr. Robertshaw said, show every promise of being adaptable to gas appliance manufacture.

"These materials" Mr. Robertshaw pointed out, "offer opportunity for new design in stoves, water heaters, and cooking appliances of all kinds. This can be so revolutionary in character as to make much of the present type appliances obsolete both as to construction and performance. Although gas appliance plants are now almost wholly converted to war work there is vital necessity for the industry to continue research work and be alert to the far reaching changes which are bound to be a post-war development."

Mr. Robertshaw is president of the Robertshaw Thermostat Company, Youngwood, Pa., which has just been awarded the Army-Navy E for high achievement in production of war equipment. The Robertshaw plant, 95% converted to manufacture of precision parts for munitions, illustrates how far the manufacture of gas appliances has been immobilized because of war work.

Servel Vice-President

Harry Newcomb

HARRY NEWCOMB has been elected a vice-president of Servel, Inc., Evansville, Ind. Mr. Newcomb will continue as general manager of the company's electric refrigeration division, a post he has held since 1936, also remain as general manager of Servel's new gas water heater division which was established last year. He joined the Servel organization in 1934 as manager of the company's commercial refrigeration division.

Conserves Manpower

CECIL L. HIGHTOWER, safety director of the United Gas Pipe Line Co., Shreveport, La., and chairman of the Accident Prevention Committee of the American Gas Association, is state representative for Louisiana on the National Committee for the Conservation of Man Power in War Industries.

Mr. Hightower's group of eight special state agents conduct training classes in war plants, principally related to accident prevention work.

Crossley Wins Award for Life Saving

WILFRED CROSSLEY, a foreman of the Philadelphia Electric Company, recently received national recognition for an outstanding act of life saving. Mr. Crossley was awarded the McCarter medal and certificate for his distinctive service to humanity and the gas industry when he resuscitated a woman who had been overcome by gas.

The award is made by the American Gas Association upon recommendation of its Accident Prevention Committee.

Lundstrum in Washington

ALLAN W. LUNDSTRUM, gas operating consultant for Ebasco Services Inc., New York, has been located in Washington, D. C. since October 8. His services have been loaned to the gas production section, Power Branch, War Production Board.

Mr. Lundstrum is an able engineer who has made many contributions toward new and improved operating methods. As a gas air conditioning expert, he is a member of the Joint Committee on Gas Summer Air Conditioning of the American Gas Association. He is well known for the development of new methods of installing and venting gas space heaters.

Keune Joins Army

FRED KEUNE, gas sales manager, Florida Power & Light Co., Miami, Fla., entered the Voluntary Officers' Training Corps of the Army in September. He is stationed at the Coast Artillery Training Center at Camp Wallace, Texas.

Mr. Keune is a member of the Refrigeration Committee, American Gas Association, the Southern Gas Association, and a director of the Florida-Georgia Gas Meters Association.

Utilities Merge

THE merger of Panhandle Power & Light Co., Cimarron Utilities Co., Guymon Gas Co., and other utility companies to form the new Southwestern Public Service Company effective Sept. 17, 1942, was recently announced by the Panhandle Division at Borger, Texas.

Old-Timer Honored

The first 50-year service pin in the history of the utility whose destinies he helped guide for half a century is awarded to C. F. Adams, president of Portland (Ore.) Gas & Coke Company from 1892 to 1910, president of the board from 1910 to 1933 and a member of the present board. He is also the oldest living ex-president of the Pacific Coast Gas Association which he headed in 1899. Mr. Adams, left, is shown cutting the 50-candle cake baked by Grace Workman, home service counselor. Watching are A. W. Lembach, veteran service man, and R. G. Barnett, vice-president and general manager. Mr. Adams is also chairman of the board of the First National Bank in Portland

Third Officer Marguerite Kirby

Lieutenant, J. G., Dorothy Church

More Gas Utility Employees Join WAACS and WAVES

AS the guiding spirit of Mess No. 8, Third Officer Marguerite Kirby has found her place in the scheme of things at the WAAC Training Center at Fort Des Moines, Iowa. Former home service director for the Old Colony Gas Company of East Braintree, Mass., and one of the first gas company employees to join the WAACS, Officer Kirby was a member of the second officer candidate class which was graduated and commissioned September 12 .

As mess officer for one of the newly opened mess halls which feed 300 persons, Officer Kirby is responsible for its entire management. One of the most gratifying factors she has found is the eagerness of many of the auxiliaries serving in her mess as kitchen police to attend Cooks' and Bakers' School in order to become specialists in that branch of WAAC service.

In many ways her assignment at Fort Des Moines is similar to her civilian work, which included nutrition lectures and demonstrations. Before her selection for WAAC officer candidate training, Officer Kirby thought her time was well-occupied by her job, to which she added the task as instructor of five Red Cross nutrition and canteen classes weekly.

A resident of Whitman, Mass., Officer Kirby was graduated from Framingham Teachers College with a B.Sc. degree in nutrition in 1940, taught home economics before joining the staff of the Old Colony Gas Company last November.

The Laclede Gas Light Co., St. Louis, is proud of another accomplishment of Gladys V. Heck, a former member of the home service department, who earned the distinction of being the first St. Louis officer of the WAACS to leave the training center for another army post. On Sept. 4, she left for Fort Riley, Kan., where she and nine other women officers were scheduled to attend a school for cooks and bakers. Miss Heck joined the Laclede organization 5 years ago.

Four employees of gas utility companies joined the growing list of women in war service recently when they were accepted for service in the Women's Auxiliary Voluntary Emergency Service of the United States Navy.

Genevieve Plagman, for nine years a member of the advertising department of the Southern Counties Gas Company of California, Los Angeles, under the direction of Norman R. McKee, vice-president in charge of sales, left the service of the company October 2 to become an Ensign in the WAVES.

Elizabeth A. Lowther, a member of the personnel department of the California company, was commissioned a Lieutenant, Junior Grade, in the WAVES at the same time Miss Plagman received her appointment.

Both of these former utility employees will train at the U. S. Naval Reserve Midshipmen's School (W-R), Smith College, Northampton, Mass., for a minimum of six weeks after which they will be assigned for active duty in continental United States.

The Brooklyn Union Gas Company, Brooklyn, N. Y., made its first contribution to the personnel of the "lady officer" corps when Dorothy Church, a member of the home service staff, was sworn in as a Lieutenant, Junior Grade, in September. She was one of the first 129 persons selected for training.

Miss Church earned her B.S. degree at Framingham College, Framingham, Mass. After being graduated, she managed the "House of Seven Gables," spent a year playing in a stock company, and worked for an electric utility in Massachusetts a short time before joining the Brooklyn Union home service staff five years ago.

Mary Woodworth, stenographer in the collection department of the Public Service Gas & Electric Corp., left September 11 for Smith College to begin her training as a first class yeoman in the WAVES. She had been with Public Service since 1939.

Fahey with WPB

J. J. Fahey, formerly distribution engineer for the Department of Public Utilities, Richmond, Virginia, is now with the War Production Board as gas engineer in the Fuel and Power Section, Office of Civilian Supply, New Social Securities Building, Washington, D. C.

THE CRITERION

("How to Buy at Second Hand" by Sigmund Sameth in Coronet *for October, 1942)*

"In scouting a second hand gas range, look for the official insignia of the American Gas Association Testing Laboratory which demands compliance with basic safety requirements. An unsafe stove in your kitchen can be as dangerous as the shrapnel which it ought to have been converted into."

Thomas N. McCarter Feted

T. N. McCarter

THOMAS N. McCARTER, chairman of Public Service Corp. of New Jersey and one of its founders, was guest of honor Oct. 20 at a luncheon celebrating his seventy-fifth birthday. The luncheon was given by 400 officers and employees at Essex House, Newark. Mr. McCarter was president of the company from 1903 until four years ago, when he became chairman.

At the directors' meeting, presided over by Mr. McCarter, Wendell J. Wright, general counsel since 1933, was elected to the board and to the executive committee to succeed Edward C. Rose, who has been recalled to military service.

"Gas Preferred for Cooking"

(The Gas World, London, September 5)

IN the report of the Committee on Land Utilization in Rural Areas recently presented by the Minister of Works and Planning to Parliament, the members state that they have taken note of evidence submitted that a large proportion of consumers, while using electricity for lighting, prefer gas for heating and cooking, and they consider that new houses should be so constructed as to give the tenants the option of using either gas or electricity for cooking and/or heating.

"The thermal efficiency achieved by the conversion of coal to gas and coke," says the report, "is such that not only should the use of coke stoves and fires be encouraged on that ground alone, but also as promoting a smoke-free atmosphere. Since gas is, according to evidence received, essential for certain industries and its place cannot conveniently be taken by electricity, we consider there should be the closest collaboration between the gas industry and planning officers, especially where the location of a new industrial plant is concerned."

The committee goes on to say that it views with approbation the growing improvement of gas distribution and the development of local gas grids, and would welcome greater uniformity of charges and conditions of supply. They believe the considerable extension of gas supplies to villages was possible, probable and desirable.

"We note with pleasure," says the report, "the attention now being paid by the gas industry to the design of gasholders, and we hope that more will be done. We recommend that the Ministry of Fuel and Power and the Ministry of Agriculture, in conjunction with bodies representing the industry and in consultation with the Central Planning Authority, should examine the possibilities of extending gas supplies to rural areas and prepare plans accordingly. We consider that gas as well as other statutory undertakings should be brought under national planning control."

First-Aid for Gas Mains

(*The Gas World,* London, August 22, 1942)

A SERIES of lectures and demonstrations, showing how to deal with air-raid damage to gas service pipes, has been given under the auspices of the London Regional Gas Centre to thousands of District and Post Wardens in the London area.

Recently, a special demonstration was arranged for the U. S. Marine Corps which is responsible for all Federal property, including the American Embassy. This course is designed to fit civil defence workers for first-aid in the repair of gas systems in the same way that medical first-aid is given to human casualties, and it is emphasised that serious damage should be left to gas company personnel.

Part of the demonstration consisted of setting a gas main on fire to show that it requires experienced men and special equipment to extinguish it. This was followed by the lighting of a service pipe to point out the wrong and right methods of extinguishing it.

Highlight of the period for the U. S. Marines was when a row of ten service pipes was lighted and the party divided into groups behind the pipes. Each man himself put out the flame and sealed the pipe with clay or wet rag. This is designed to give confidence in the handling of breaks of this sort, and the success of method was evident in the impression left of the simplicity of the operation. General hints, methods of resuscitation of town gas victims and questions wound up the demonstration which was conducted by R. N. LeFevre.

Most A.R.P. wardens in the London area have now been given courses by their Post and District chiefs, who have themselves attended the demonstrations, as well as members of the Metropolitan Police. A site in Westminster has been set aside for the purpose of the displays, which will continue for the benefit of other bodies which may find them of value.

CONVENTION CALENDAR

NOVEMBER

Nov. 5-6-7 **American Trade Association Executives**
Pennsylvania Hotel, New York, N. Y.

9-13 **American Petroleum Institute**
Palmer House, Chicago, Ill.

10-12 **National Association of Railroad and Utilities Commissioners**
Coronado Hotel, St. Louis, Mo.

13 **Mid Southeastern Gas Association**
Raleigh, North Carolina

16-18 **American Institute of Chemical Engineers**
Netherlands Plaza Hotel, Cincinnati, Ohio

24-29 **National Chemical Exposition and National Industrial Chemical Conference**
Sherman Hotel, Chicago, Ill.

28 **Pennsylvania Natural Gas Men's Association**
Pittsburgh, Pa.

30-Dec. 1 **National Industrial Council**
Waldorf Astoria Hotel, New York, N. Y.

30-Dec. 4 **American Society of Mechanical Engineers, Annual Meeting**
New York, N. Y.

DECEMBER

Dec. 2-4 **National Association of Manufacturers & Congress of America**
Waldorf Astoria Hotel, New York, N. Y.

8-9 **American Management Association Insurance Conference**
Drake Hotel, Chicago, Ill.

10 **American Standards Association, Annual Meeting**
Hotel Astor, New York, N. Y.

Gas Cooking Controls

HELPFUL information about the advantages, economies and operation of thermostatic controls for commercial cooking equipment is contained in a new 18-page, illustrated booklet just issued by the Robertshaw Thermostat Company. The booklet covers various efficient types of thermostats for a wide range of equipment.

Copies are available free upon request to the company, 30 Church St., New York.

Mid-Southeastern Gas Association

A WELL-ROUNDED program is being arranged for the one-day meeting of the Mid-Southeastern Gas Association which takes place November 13, at the Sir Walter Hotel, Raleigh, N. C. Hon. J. M. Broughton, Governor of North Carolina, will be the guest of honor and speaker at the banquet that evening.

Among the business meeting speakers will be H. M. Brundage, deputy director, War Production Board, New York City, and H. Carl Wolf, president, Atlanta Gas Light Company, Atlanta, Ga., and chairman, Committee on National Advertising.

Rev. Pearce Harris, Atlanta, will be the principal luncheon speaker.

Accountants Face New Problems of War Economy

A WAR economy has brought the utility accountants a multitude of new problems which are taxing their skill and ingenuity to solve in the face of manpower and material shortages, demands of government agencies for information, and other factors. Many of these problems were reviewed, clarified and distilled in the crucible of exchanged experiences at the series of group meetings which took place in Chicago, Illinois, during the annual meeting of the American Gas Association, October 5 and 6.

Beginning with a group of committee meetings at 10:00 a.m., October 5, the program continued with a business meeting at noon, an accounting section luncheon at 12:45 p.m., and six separate group meetings from 2:00 p.m. through the afternoon. L. L. Dyer, comptroller, Lone Star Gas Company, Dallas, Texas, chairman of the Section, presided at the business meeting.

L. A. Mayo, supervisor of local accounts, Connecticut Light & Power Co., Hartford, Conn., was elected chairman of the Accounting Section for the new year. O. H. Ritenour, assistant treasurer, Washington Gas Light Co., Washington, D. C., was named vice-chairman.

It was emphasized at the meetings that accountants can make a great contribution to the war program by channeling into government agencies the fundamental data essential to the proper administration of the war program. That the War Production Board recognizes this fact was evident in a recent statement that "the number and variety of data request flowing out to industry have constituted a serious drain on the time and energy of business administrators and their staffs."

"The rapid multiplication of the war agencies," according to Joseph I. Lubin, chairman of a government Committee for the Review of Data Requests from Industry, "and the unprecedented expansion of their functions have led to a mushroom growth in the forms, reports, questionnaires and other official paper." Speaking before the American Institute of Accounts on Sept. 29, Mr. Lubin stated that it was the task of his committee "to review all data requests, eliminating the unnecessary, improving the unfit, and in general coordinating the entire system of reporting to the War Production Board."

A. G. A. Activities Reviewed

In spite of the burden of work necessitated by war reports, the A. G. A. Accounting Committees have done an outstanding job this past year, Mr. Dyer reported in his Chairman's Address. He reviewed briefly the highlights of the year's events which he cited as follows:

The Materials and Supplies Committee, which was a new committee established this year, cooperated with the government in connection with the salvage drive by attending meetings, securing information from the gas industry and assisting in the formulation of plans to secure the greatest response to the government's requests.

The Insurance Committee, at the request of the A. G. A. Committee on War Activities, made a survey of the War Risk Insurance being carried by gas, electric and water utilities. In cooperation with the E. E. I. Insurance Committee, this committee was successful in securing a substantial reduction in rates for war risk insurance on utility properties, resulting in a large saving for the industry.

L. A. Mayo, of Hartford, (right) newly elected Chairman of the Accounting Section, receiving the congratulations of his running mate, O. H. Ritenour, of Washington, who was named Vice-Chairman

The Depreciation Accounting Committee has completed a History of Depreciation Accounting in Electric and Gas Utilities, and is preparing an analysis of the testimony by both company and commission representatives in one of the outstanding rate cases of the year.

The Customer Activities Group of Committees has contributed plans and suggestions for meeting problems in handling of customers' accounts and service, such as shortages in manpower, rationing of gasoline, conservation of automobile and tires, training of women employees, etc.

Although not essentially an A. G. A. activity, members of the Section responded to a request from W.P.B. that six companies be appointed to work with them in developing conversion factors by which materials could be converted from a dollar basis of reporting to pounds of critical materials, the purpose being to arrive at a total tonnage of critical materials which the industry as a whole would need per

Head planners for 1942-1943—Left to right: E. F. Embree, Coordinator of Customer Activities Group; L. A. Mayo, Section Chairman; O. H. Ritenour, Section Vice-Chairman; and R. E. Hull, Coordinator of General Accounting Group

annum for maintenance and operation. A committee headed by O. H. Ritenour, coordinator of General Accounting Activities, was formed and met with W.P.B. representatives in Washington. Up to that time the work was primarily on distribution, but on March 16, 1942, the revised Order P-98 was issued by O.P.C. which definitely put transmission lines under Order P-46. The natural gas representatives of the committee prepared and submitted to W.P.B. figures on critical material tonnages required for the maintenance and operation of main truck transmission lines.

Depreciation Accounting Developments

A summary of developments in depreciation accounting was presented at the general business meeting by H. L. Gruehn, vice-chairman of the committee and chairman of the Depreciation Committee of the Edison Electric Institute, in the absence of H. C. Hasbrouck, chairman of the A. G. A. committee. Speaking from notes prepared by Mr. Hasbrouck, Mr. Gruehn reviewed the work of the committee and outlined the probable program for the coming year.

As for some time past, the chief function of the committee has been to cooperate with the Depreciation Committee of the National Association of Railroad and Utilities Commissioners and the Depreciation Committee of the E.E.I. in studies dealing with accounting for depreciation. Mr. Gruehn said that the principal result of the committees' work during the past year was a study of methods for estimating service lives of depreciable property, which had been prepared at the specific request of the N.A.R.U.C. Committee, and had been completed and presented to that body in February. He further stated that the chairman of the N.A.R.U.C. Committee had indicated that the industry committees would be asked to offer their comments and suggestions for the report which his committee has under way.

Other papers or studies undertaken by the industry committees include the "History of Depreciation Accounting in Electric and Gas Utilities," mentioned above, and "Certain Views of Accounting for Depreciation," recently completed. A summary of the testimony on depreciation in an important rate case settled in 1942 is also nearing completion.

There follows a brief review of the series of six group meetings held the afternoon of October 5.

Customer Activities Group Meeting

G. W. Fuchs, Coordinator
Philadelphia Electric Co.
Philadelphia, Pa.

Following separate informal meetings Monday morning of the three committees in this group namely, Customer Accounting, E. F. Embree, New Haven Gas Light Co., New Haven, Conn., chairman; Customer Collections, W. R. Seidel, Rochester Gas & Electric Corp., Rochester, N. Y., chairman; and Customer Relations, Ohmer Ullery, The Ohio Fuel Gas Co., Columbus, chairman, a formal joint meeting of the three committees was held Monday afternoon. This session was essentially a continuation of the Spring Meeting of utility accountants held in Cleveland, Ohio, May 11 and 12, at which four theoretical plans of meter reading and billing as a substitution for the standard monthly reading and billing plans in general use, were presented.

Shifting the emphasis from theoretical possibilities to actual experience, a major part of the program was devoted to three reports on actual installations of new meter reading and billing plans introduced by various companies. H. J. Johnson, Michigan Consolidated Gas Co., Detroit, Mich., outlined a plan of bi-monthly meter reading with estimated billing in the non-reading months. J. A. Williams, Niagara Hudson Power Corp., Syracuse, N. Y., presented a report on quarterly meter reading with estimated billing in the non-reading months. E. N. Keller, Philadelphia Electric Co., Philadelphia, Pa., reported on quarterly meter reading with budget or memorandum billing on postal cards in the non-reading months. These presentations were especially timely and valuable, affording an opportunity for comparison of the relative merits of each plan.

As a direct follow-up of these new plans, Mr. Ullery of Columbus reported on notices, letters and advertising matter employed in notifying customers of changes in meter reading and billing practices. It was emphasized that the maintenance of good customer relations calls for reasonable and logical explanation to customers of any changes in meter reading and billing practices. Mr. Ullery's report which was in printed form was distributed to those present.

The use of women as meter readers was outlined by C. E. Johansen, Atlanta Gas Light Co., Atlanta, Ga., and as collectors by Mr. Mayo, of the Connecticut Light & Power Co., Hartford. The experience of these two companies with such personnel for outside work was extremely interesting in view of the emergency situation.

Accomplishments of a collection department operating without collectors were described in the final report of this meeting by H. S. Hahn, The Ohio Fuel Gas Company, Columbus. Mr. Hahn gave one company's answer to problems arising from personnel shortages and transportation restrictions.

At the end of each report, open discussion from the floor added many points to the formal program contributions.

General Accounting Meeting

R. E. Hull, Chairman
United Gas Pipe Line Company
Shreveport, La.

The General Accounting meeting was conducted as an open forum for discussion of subjects important during wartime. Interest centered around the growing problems of accounting personnel, the replacement of men with women employees, and the training of new employees. As an important step in relieving this situation, it was pointed out that accounting work and various financial and operating reports are being re-examined with a view to scaling down non-essential items and better controlling operations.

Experience of various companies in requesting deferments for vital accounting men was related and the opinion expressed that this problem should be considered on a national basis rather than in piecemeal fashion.

The requirements of regulatory commissions in connection with accounting procedure and reports were also discussed. It was felt that some relief might be granted by these agencies in order that accounting personnel could devote more time to valuable war work.

Materials and Supplies Meeting

Carl H. zur Nieden, Chairman
Philadelphia Electric Co.
Philadelphia, Pa.

This meeting again brought out the value of women replacements—this time in stores accounting, purchasing and stores work. It was stated that one company "deep in the heart of Texas" was using husky young ladies to handle and issue material from storerooms. Where the material was too heavy for them to handle, the volunteer services of the construction gangs solve the problem.

Salvage and reclamation came in for extended discussion at this session and it was indicated that the possibilities were far from exhausted. For example, the practice of welding short lengths of pipe together to provide service extensions, reported by one company, may become common practice.

The related subjects of priorities, preference ratings and limitation orders received much attention. A short history of Preference Rating P-46 was presented and short memoranda of company practices were contributed. The interest was such that the informal discussion both "off and on the record" extended the allotted time of the meeting.

Property Records Meeting

E. F. Wressell, Chairman
Northern Indiana Public Service Co.
Hammond, Ind.

Much valuable information on the subjects of utility plant records and wartime personnel problems was contributed at this meeting. The discussion was divided into the following general classifications:

(a) Simplification of existing practices and records.

(b) Employment of female help in plant and property field and accounting work.

(c) Plant and property accounting problems confronted by the companies represented and procedures followed to meet such situations.

(d) General discussion relating to the various kinds of overheads and the practices followed in capitalization of such expense.

Taxation Accounting Meeting

H. D. Heiby, Chairman*
Columbia Engineering Corp.
New York, N. Y.

Mr. Heiby opened this meeting with an outline of the latest tax legislation developments after which there was general discussion.

A short paper by R. E. Chatel, Middle West Service Co., Chicago, on depreciation on so-called "donated lines" was presented by L. A. Swanson of that company. The paper discussed decisions in recent cases. A table presented by Mr. Swanson showed adjustments made to the depreciable base for retired property applicable to contributions of one corporation.

A statement on Treasury Tax Savings Notes, 1945 Series, was read by Mr. Heiby. There followed a general discussion of amortization of war facilities conducted by R. M. Dodds of Ebasco Services, Inc., New York.

Under the heading of accounting for proposed post-war credits or refunds, the question of earmarking surplus should the use of credit for the payment of dividends be prohibited, was discussed. Discussion of a variety of special taxation accounting subjects rounded out the meeting.

Insurance Meeting

Reginald Fleming, Chairman
New York, N. Y.

Chairman Fleming opened the meeting with a review of the activities of the Insurance Committee for the year 1941-1942. The Committee's work was unanimously approved and Mr. Fleming received a personal tribute, when later in the meeting, J. H. Nickel presented a handsome desk pen and lighter set to him in behalf of the Insurance Committees of the American Gas Association and the Edison Electric Institute. I. M. Carpenter, newly appointed chairman of the committee for the coming year, presided during the last part of the meeting.

Following description of the fire-retardant properties of "Firepel," a newly developed chemical treatment for unfinished wood, by Tom Prendergast of the Albi Chemical Corp., the meeting was launched into a discussion of the War Damage Corporation's policies. A questionnaire is to be submitted to various companies on this subject shortly and more complete information will be made available.

It was reported to the meeting that the boiler and machinery insurance rates under the new schedules promulgated by the National Bureau of Casualty & Surety Underwriters have resulted in a substantial increase in premium instead of a decrease.

It was voted to continue cooperation with the National Fire Protection Association and other organizations interested in fire protection. A subcommittee will be formed for this purpose. A general discussion of fire insurance rates concluded the meeting.

* Mr. Heiby presided at this meeting in place of the committee chairman, R. M. Campbell, Standard Oil Co. of New Jersey, New York, N. Y., who was unable to be present.

Women Collectors

By L. A. Mayo

The Connecticut Light & Power Co., Hartford, Conn.

ABOUT eight months ago, our company decided to try girl collectors. Two girls, in two different districts, were assigned to this work; note I say girls for they are young and attractive persons.

They were carefully selected for personality, appearance, and experience in handling customer contacts. We were fortunate to have two girls available who preferred outdoor work. This was very important to their success as collectors. These girls already had about 1½ years' training, calling at customers as home lighting representatives, so they were well equipped to meet the public on their own ground.

We explained to the men collectors that the company was trying to anticipate man power shortages by using girls for this work. The men accepted this encroachment of their field in good spirit and the girls went to work.

At the outset, they trained with a man collector about a month before going out on their own. During this period they learned the routines and many new problems peculiar to outside collecting.

Then they started collecting all types of accounts, gas and electric service, merchandise and repair charges, exactly as the men. They called on all types of residential or commercial customers. However, they have not been asked to call on taverns, pool rooms or places of questionable repute, such calls being handled by men collectors only.

The girls have not been required to disconnect service for non-payment, but they know how to do this work, as well as read meters. So far, such calls have been handled only by men. But, if we continue to lose men, we will ask them to take over questionable calls as well as disconnections, fully believing they will do a good job.

Based on an eight months' record, these 2 girls have averaged as many daily calls as men and what is more to the point, have slightly bettered the men's record for money collected. In urban and suburban territories, they have averaged about 50 calls a day, the amounts collected naturally varying with the delinquencies of the accounts involved.

They walk, ride buses, or drive company cars, depending on the territory. They dress to their own taste in keeping with the weather. Cold, rain or snowy weather has not discouraged them at all and they are on the job every day.

Our office managers report they are doing a fine job and others are now being considered for similar training. What started out to be an experiment has given the most satisfactory results. Our company would not hesitate to employ more girl collectors as the occasions arise.

Conover Recovering from Injury

JOHN L. CONOVER, general commercial manager of Public Service Electric and Gas Company, is convalescing at his home at 34 Woodland Avenue, Avon, N. J. Mr. Conover sustained a fractured hip in a fall on June 13, 1942.

Mr. Conover served as chairman of the Accounting Section in 1930 and has contributed generously to Association activities for a good many years. He is now a member of the Section's Advisory Committee and his advice and counsel have been sorely missed these past few months.

Quarterly Meter Reading System Installed

A NEW quarterly meter reading plan of the Connecticut Light and Power Company now is in effect. While gas meters will be read only once every three months, customers will continue to receive monthly bills, those in the interim being average bills.

In order to carry out the plan, the present cycle of meter reading has been divided into three parts, one part being read each month and the remaining two receiving average bills. Consequently every third month each group will have its meters read.

For customers who prefer to have their bills issued each month from actual readings, an optional plan is available. By reading their own meters on the usual reading date, filling out and mailing post cards which may be obtained from the company, these customers will receive bills based on such readings.

As a result of this plan, 18 automobiles will be taken out of service, mileage cut 173,000 miles annually, and 11,500 gallons of gasoline saved.

Limelight

A term associated with the stage, such as "seeking the limelight," is closely connected with the gas industry. The first intense white light developed for the theatre was obtained by directing a gas flame on a block of lime.—*William Helme*

Residential SECTION

B. A. SEIPLE, *Chairman*
C. V. SORENSON, *Vice-Chairman*
J. W. WEST, JR., *Secretary*

Planning and Preparing for Post-War Sales

By C. V. SORENSON

Midland Utilities Company
Hammond, Ind.

IN approaching this subject, it is recognized that there is a wide variation of opinion as to the merits or value of post-war planning. There are those who feel that future planning in the face of present day uncertainties is a complete waste of time, while others are just as emphatic in their belief that industry will be "caught short," if it arrives at the end of the war with no definite plans for a change to peacetime operation. Further inquiry tends to indicate that a reason for the wide divergence of opinions on this subject can be found in the circumstances surrounding the individual case. We are interested in the gas industry so let us use it as an example to illustrate the point.

On September 26, a news release stated that if the war were to end at once, the public within six months' time would purchase $5,000,000 worth of civilian goods. Among the items listed were 2,100,000 autos, 1,500,000 mechanical refrigerators, 1,200,000 washing machines, etc. If the gas industry were to get excited over such a release and decide that it must make immediate plans to get its share of this business with no further thought to what is involved, it can be understood why there are those who feel that future planning now is a waste of time. Closer examination of the question reveals that there are many other problems involved which must be answered in the light of local conditions before a company can safely undertake post-war planning.

I. There is the problem of forecasting future market trends and preferences which resolves itself into several specific questions.

A. There will be a change in public preference because of use restrictions. For example, who can predict the far reaching effect of the curtailment of automobile use? Will the filling station and roadside restaurant as we have known them in the past ever again enjoy the same amount of business? Will public preference shift to other modes of travel? Will automobiles of the future be of a type that will require less stops for service?

B. Next is the change of trends because of the use of substitute materials; for example, the present curtailment of metal items for civilian use such as household aluminum and the substitution of plastics for many metal items. Will the public be permanently satisfied with some of its present day substitutions?

C. Next comes a change of goods offered by manufacturers. For instance, automobile manufacturers have in many cases assumed airplane war contracts. Will those manufacturers ever go back to producing automobiles in the same volume as before or will they make use of their new manufacturing experience to continue in airplane production after the war?

D. Then there will be the manufacturer who through no fault of his own loses his present market and will be financially unable to recapture it in the post-war period.

The above points illustrate problems which it is almost impossible to answer at the present time.

II. We can answer the question, "Is post-war market planning futile and a waste of time?" by analyzing the type of market we are interested in. Roughly speaking, a market can be broken into two broad classifications:

1. The basic essentials such as food, clothing, transportation, shelter, and allied services. Those interested in this market know that it always exists subject only to certain style preferences.
2. Luxury or preference goods constitute an unstable market highly sensitive to many influences. An example would be the matter of cuffs on men's trousers. To the average individual, the change to cuffless trousers was of small consequence and is soon forgotten entirely. To the manufacturer of woolen cloth who in normal times attempts to meet competition through volume production, this slight change probably represents in the aggregate an important volume of business. Can he be sure that the cuff style will ever return or is this volume lost permanently?

III. Looking at the gas industry on the above basis, we must conclude that gas in the home is not essential, but it supplies an essential service, for food preparation, food preservation, and heating water and hence for health and sanitation. There is a fine

Residential Section officers at a meeting, October 5, in Chicago. Left to right around the table: Jessie McQueen, Home Service Counsellor; Wallace M. Chamberlain, Chairman, Domestic Range Committee; R. J. Rutherford, past Section Chairman; Jeannette Campbell, Chairman, Home Service Committee; John W. West, Jr., Section Secretary; B. A. Seiple, Section Chairman; E. J. Boyer, Chairman, Advisory Committee, and retiring Section Chairman; C. V. Sorenson, Section Vice-Chairman and Chairman, Refrigeration Committee; J. H. Warden, representing S.G.A.; W. L. Jones, Chairman, House Heating and Winter Air Conditioning Committee; F. M. Rosenkrans, Chairman, Committee on Improving Domestic Gas Appliances; and Hall M. Henry, Chairman, Market and Economic Research Committee

Left to right: B. A. Seiple, Section Chairman for 1942-1943; C. V. Sorenson, incoming Vice-Chairman; and E. J. Boyer, retiring Chairman

difference here which means a great deal to the gas industry. If gas were essential in the home, our post-war market would be assured. Supplying an essential service, as we do, we know the public will continue to have the service, but conceivably could substitute other fuels so we must have some plan for meeting market competition in the post-war period.

IV. What kind of planning is necessary? Upon inquiry, we discover that one type of plan will not meet all industry problems. For instance, there needs to be a general plan for the industry because:

1. Of possible changes due, for example, to the future chemical value of gas. What effect will this have on distributing companies?
2. Will the future value of by-products affect manufacturing companies? Are we learning new things and using new processes which may make the gas plant of the future a chemical plant with gas as a by-product?

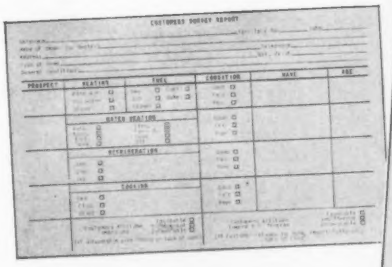
These points illustrate broad special problems which the technical men and scientists will have to answer. The individual company can only guess about its future.

Estimate Post-War Loss

A specific problem for the individual company will be to estimate the amount of load it will lose when the war ends and determine how much new load in terms of revenue will be required to maintain the company's net position. This will not involve a replacement of volume of gas lost; neither will it mean that, having increased from a pre-war level in revenue to a war maximum, that we can lose the war business and be in the same net position as before. An added tax burden, permanently higher operating costs, and other similar factors make it necessary to determine anew the revenue necessary to keep the individual company in a satisfactory condition. Where and how to secure this necessary revenue becomes a problem for study and suggests a start in post-war planning of the type which has promise of being of value.

An analysis of the classes of business

(Continued on next page)



R. J. Vandagriff, St. Louis, explaining the Home Volunteer Plan as adopted by the Laclede company. The survey card above is used to gather valuable market data

Residential Meeting Discusses Home Front and Post-War Activities

TAKING care of the "home front" during the war and preparing for future operations was the dual theme of the Residential Section meeting in Chicago, October 5, which attracted a representative attendance of sales executives. Four vital subjects—maintaining customer contacts, preparing for post-war sales, research, and nutrition—were presented by nationally known speakers.

B. A. Seiple, vice-president, Jersey Central Power & Light Co., Asbury Park, N. J., was elected chairman of the Section for the 1942-1943 term. C. V. Sorenson, supervisor, new business, Midland Utilities Company, Hammond, Ind., was named vice-chairman. Mr. Sorenson presented a provocative paper on post-war sales which is reproduced on accompanying pages of this issue.

E. J. Boyer, chairman of the Section and sales manager, Minneapolis Gas Light Company, reviewed residential sales projects and paid tribute to the outstanding work of utility home service departments in community war activities. He emphasized the need for maintaining customer satisfaction during this critical period and urged gas companies to continue their advertising programs and assist their dealers.

Referring to the need for gas range research, Mr. Boyer said, "Now, if ever, is the right time to perfect the gas range for the next war—the battle of cooking fuels." He called for research along two parallel lines, mechanical perfection and sales appeal. "The gas range after victory must have more mechanical and sales appeal than any competitor can possibly offer," he said.

Rounding out the discussion of research, F. M. Banks, vice-president, Southern California Gas Company, presented a paper by F. L. Fletcher, vice-president, Providence Gas Company, and chairman, A. G. A. Domestic Gas Research Committee, outlining a comprehensive and far-reaching program involving all domestic gas appliances which is under consideration.

R. J. Vandagriff, general sales manager, Laclede Gas Light Company, St. Louis, told how his company is utilizing the Servel Home Volunteer Plan to maintain customer contacts during the war. Not only does this program offer the gas company a splendid vehicle for providing vital nutrition and conservation information for use

Scenes at the Residential Section meeting. Left—Chairman E. J. Boyer presiding, with Secretary J. W. West, Jr., in a supporting role. At right—George S. Jones, Jr., Vice-President, Servel, Inc., presenting the Nutrition in Industry program, points out the tremendous war losses resulting from illness

in the homes, he asserted, but it provides tremendous potential sales possibilities as well.

He estimated that in approximately two and one-half years, gas utility representatives will be able to cover every home owner within the corporate limits of St. Louis. At the end of that period, the company will have a complete inventory of what appliances each home-owner has, with complete information as to type, age, condition and attitude of housewife or owner toward gas.

Valuable background on the Nutrition in Industry program was provided by George S. Jones, Jr., vice-president and general sales manager, Servel, Inc., who explained why his company had undertaken such a comprehensive project. He pointed out that gas companies can provide the trained home economists and nutritionists, the demonstration rooms, kitchens and appliances needed in the effective operation of such an industrial nutrition program. The program was announced to the industry in the September issue of the A. G. A. MONTHLY.

PREPARING FOR POST-WAR SALES

(Continued from previous page)

served will indicate where we may expect to secure new business and the answer will vary in different locations. Generally speaking, however, it can be stated that the industrial classification will not offer an immediate field. Commercial customers are usually so classified that a reasonably quick estimate can be made of new business possibilities, although in many locations post-war increases will not do more than make up losses experienced in this classification during the war period, so it appears that the residential market including home heating will offer the best opportunity for post-war load building.

Therefore, if we estimate the industrial revenue that will be lost when the war ends, and take credit for any increased commercial revenue that can be foreseen, the difference between that net figure and the amount of revenue necessary to obtain will be a measure of the task. From this task figure, it is possible to determine the volume of gas that will have to be sold, knowing the rate classification in which it will fall. A specific example would be to set up a possible saturation goal in the residential market as follows:

Cooking	90% saturation at	8 Therms/mo.
Refrigeration	20% " "	11 Therms/mo.
Automatic water heating	30% " "	115 Therms/mo.
Tank water heating	20% " "	7 Therms/mo.

The above would result in an annual residential use of 183.6 therms per year. Assuming this to be greater than present sales, then calculating by types of service according to rate schedule, we would find the amount of added revenue to be obtained and if this figure were not sufficient, it would be necessary to revise the goal upwards or go into the home heating market for the difference. This latter problem would require a study of the economics of home heating for the particular company involved in order to determine the final net results possible, and the answer would reveal the amount of home heating it is necessary to secure.

V. How will we secure the added load? The foregoing gives us an indication of the steps necessary before actual post-war market planning should be undertaken and only after this is done can we make plans for again entering the market and then must determine the method to be used. Several methods will be available. For example:

A. Straight utility merchandising.
B. Distribution through dealers. Some companies have in the past worked through dealers entirely and having done no sales work themselves.
C. A combination of utility and dealer merchandising whereby the gas company attempts to lead the way but encourages dealers to secure as large a share of the market as possible. It might be said here that many gas companies in the past have looked at merchandising as an independent operation and have measured the value of their sales department by the volume of merchandising business done.

A planned approach to necessary load building would tend to eliminate this measuring stick entirely.

If it is decided to enlist the help of the dealer, then it would be necessary to recognize the fact that the dealer will be interested to the extent of his knowledge of profit possibilities in the merchandising market in question. This information can best be supplied by the gas company, probably through the medium of an actual market survey. Many companies are taking advantage of present day conditions to contact their customers individually and among other things find out the age, make, and condition of gas equipment in use. This information can be used in several ways:

A. It uncovers service or repair work that should be done now to insure continued operation of the appliance. This work insofar as possible can be turned over to dealers, providing a means of income to help tide over the present restricted market.
B. It renders a service which the customer appreciates.
C. Helps maintain domestic revenue.

Information collected on these surveys can be tabulated to show the size of the post-war market for the replacement of overage appliances and the possibilites of post-war market expansion. It will permit the gas company to submit definite figures to the manufacturer and distributor showing the relative position of their goods in this particular market and indicating the effort that will be necessary to either maintain or increase that position. For example, a manufacturer with only 5% saturation of his item in a given market must make a different type of market approach than one who has, for instance, 50% saturation.

It seems quite possible that a planned approach to post-war planning can be made so successful that gas companies, dealers, and manufacturers will be better able to compete in the post-war market and realize greater benefits from their efforts and it is entirely possible that one of the larger future responsibilities of the gas company sales department will be to supply correct market information to the manufacturer and his distributing outlets.

Sales Managers To Meet

THE next New York-New Jersey Sales Managers Round Table Discussion will be held at the Hotel New Yorker, New York City on Friday, November 20.

The meeting will be devoted to a discussion of war and post-war policies.

Handbook Gives Range Servicing Data

AN excellent Service Handbook has been prepared by the Geo. D. Roper Corp., Rockford, Illinois, which covers the operation of Roper gas ranges as far back as 15 years. This handbook deals with top burners, ovens, broilers, automatic lighters, safety pilots, etc. Amply illustrated and containing answers to specific service problems, it is far-reaching in its scope. The Handbook is offered at a cost of 50¢ per copy.

The book will prove invaluable as a text book in service training according to the company. The necessity for using the Handbook as a guide in maintaining good public relations by keeping gas ranges in good operating conditions is emphasized. This is in step with the desires of the War Production Board. The entire plan emphasizes the idea of repairing and reconditioning wherever possible instead of replacing.

A statement of company policy is made indicating a desire to go as far as possible in replacing parts. It is pointed out, however, that new parts should be ordered only after every effort has been made to recondition the existing part.

Newspaper advertisements stressing appliance service and posters for window use represent important units in the company's effort to help solve the problem of gas range servicing under war conditions.

The problem of national survival in its simplest form is the problem of acceleration.—Erwin H. Schell.

Home Service Puts War Job First at 10th Annual Breakfast Meeting

Louis Ruthenburg, President of Servel, Inc., speaking at the Home Service Breakfast. Others in the picture are, left to right: Walter C. Beckjord, past A. G. A. President; Mr. Ruthenburg; Helen Walsh, Chicago, regional nutrition director; President George S. Hawley; Managing Director Alexander Forward; Jeannette Campbell, Chairman, Home Service Committee; and past A. G. A. President Herman Russell

CONSIDERING the character and extent of their contributions to the country's war effort, particularly in nutrition and conservation work, it was appropriate that the popular Home Service Breakfast October 6 during the A. G. A. Annual Meeting in Chicago should revolve around the theme, "War Service for Home Service." It was appropriate, too, that the setting was Chicago, where exactly ten years before, the first such occasion was introduced to the gas industry's annual meeting. During that period, Home Service has grown to national stature with an enviable record of outstanding accomplishments.

With Jessie McQueen, home service counsellor of the American Gas Association, presiding, a rapid-fire program of home service activities was presented to a large and interested audience. During the introductions preceding the formal program, Walter C. Beckjord, vice-president and general manager, Columbia Gas and Electric Corp., was given recognition for the encouragement he gave the annual breakfast feature which started during his administration as chairman of the Residential Section.

E. J. Boyer, sales manager, Minneapolis Gas Light Co., and chairman, Residential Section, spoke briefly, paying high tribute to the contributions of the Home Service Committee this year, particularly the two booklets, "Home Service Volunteers" and "Uncle Sam Wants It to Last."

Alexander Forward, managing director, American Gas Association, called attention to the fact that women would soon be working in all fields of endeavor but none would do more vital work than the highly trained home service personnel.

After being introduced as the head of the first company to inaugurate the famous Bridgeport plan for industrial nutrition George S. Hawley, president, The Bridgeport Gas Light Company, and president of the Association, commended the home service departments for their achievements in simplifying the technical subject of nutrition and dramatizing its highly important story. He also complimented them for being prepared to assume leadership when the government's nutrition program was organized.

At this point in the program, Miss McQueen censured Lady Bad Luck for striking a dual blow at the Rochester company and the Home Service Committee when the illness of Helen Smith forced her to give up her leadership of home service work as chairman of the committee soon after she had started an effective war program. Herman Russell, president of the Rochester Gas and Electric Corp., extended Miss Smith's greetings and reported that her health was improving.

War Service for Home Service

To set the theme of the breakfast "War Service for Home Service," Jeannette Campbell, home service director, Minneapolis Gas Light Company, as incoming chairman of the Home Service Committee, reviewed the work of the home service departments in cooperating with the war effort. She then outlined the plans of the Home Service Committee for next year. Miss Campbell's talk was illustrated by large blow-up charts of special activities and an illustrated book-

(Continued on page 424)

Dr. Goodhart on NUTRITION AND MORALE

WHAT do we expect from nutrition? We certainly do not expect to make people more warlike by feeding them; we don't expect to make them more dissatisfied, in fact we hope and expect to make them more content. We know that starvation is a breeder of discontent and of warlike spirits, not only in individuals but in nations.

Our object in trying to feed the country well is to make people content; make them able and strong enough to stand the strain which the war is thrusting upon them in the direction of increased efforts and energy. It is a function of society as a whole and it is a function of other departments of our government. Our whole job in this nutrition program is to enable people to be able to do the things that society requires of them.

This is particularly important at the present time in relation to war workers, not only because they are being put under an increased strain, but because many of those now coming into factories are not in good health. They have not been employed in factories before; they have not been well-fed; they may have been rejected in the draft. A considerable expenditure of time, energy, money and intelligence by all of us is demanded in order to see that these people can stand the strain.

These problems must be met in such a way that the morale of the people is not broken. The people must be educated to get the most out of foodstuffs available. They must be educated to take substitutes and alternative foods and they must be educated to the proper food value of every item on the market.

Dr. R. S. Goodhart, Office of Defense Health and Welfare, Washington, D. C.

Industrial and Commercial Gas Meetings Probe War Production Factors

George F. B. Owens

THE tremendous part gas plays in producing the articles of war provided the central theme at meetings of the Industrial and Commercial Gas Section during the Association's annual meeting in Chicago, October 5 and 6. Important utilization problems, supply and conservation of gas in already overloaded factories, government specifications for war plant fuels—each received the attention of experts from all parts of the country; and out of the many ideas brought forth and the lively discussions which followed, came definite ideas for those present to take home and help speed war production in their localities.

Industrial Gas on the Job

When Chairman George F. B. Owens of the Industrial and Commercial Gas Section called the members to order, following a delightful luncheon, there was a capacity crowd. Mr. Owens briefly outlined some of the high points of industrial and commercial gas in the war effort and reviewed the actions of the Section, first, in connection with gas in production for defense and, since December, for all-out war. He commended the industrial gas sales-engineers of the utilities and of the equipment manufacturers on the way they are fulfilling their difficult role and expressed the opinion that many factory operations have been speeded up because of their work.

Mr. Owens pointed out that a large part of the great cooking job undertaken by the Army and Navy is utilizing the modern types of heavy duty gas cooking and baking appliances that have been developed during the past few years. The severest requirements on equipment, caused by the hard service required when feeding thousands of hungry men three times a day, are being fully met by these sturdy gas appliances.

The feature speaker at the Industrial and Commercial Gas Luncheon was Major John L. King, Chief of Fuel Section, Resources Division, War Department, Washington, D. C. Major King, who represents the War Department on the Army and Navy Munitions Board, outlined the steps now being taken by the Government, and some of the steps being planned for later execution, to assure a full supply of fuel for all war production industries through this winter and for the duration. Some straightforward things were said to the industrial gas men present which will be helpful in handling the fuel situation in war factories this winter.

In addition to Major King, Lieutenant Commander S. Procter Rodgers, representative of the Navy on the Army and Navy Munitions Board, and J. W. Batten, Chairman of the Committee on Industrial Gas Research, were guests of the Section at the luncheon.

Association officers discussing fuel problems with Army and Navy representatives. Left to right: George F. B. Owens, retiring Chairman, Industrial and Commercial Gas Section; Lt. Com. S. Procter Rodgers, Munitions Board; B. H. Gardner, incoming Section Chairman; and Major John L. King, War Department fuel chief

Election of officers was held at the luncheon. The Chairman of the Nominating Committee, H. Carl Wolf, Atlanta, Ga., presented nominations on behalf of his committee. These were: For Sectional Vice President of the Association and Chairman of the Industrial and Commercial Gas Section, Ben H. Gardner, Vice-President, Columbia Engineering Corporation, Columbus, Ohio; for Vice-Chairman of the Section, Charles G. Young, Manager, Springfield Gas Light Company, Springfield, Mass. They were unanimously elected.

At the Industrial and Commercial Gas session, Chairmen of the Section's committees presented their annual reports. Upon completion of the presentation of these reports the balance of the session was devoted to "Problems in Connection with the Use of Gas in War Production"—an open meeting sponsored by the Managing Committee. A list of topics had been prepared by members of the Managing Committee and, with Chairman Owens presiding, each topic was taken up separately and thoroughly analyzed. Among the topics discussed in this manner were:

(1) Industrial and Commercial gas operations under Limitation Orders L-31 and L-174.
Public relations under limitation orders.

(2) Are any criterions being developed for determining terms of acceptance of industrial temporary loads on the basis of adequate return and amortization over a short period?

(3) What are most important things industrial and commercial salesmen can do to help war effort? What measuring stick can be used to determine if gas company contacts with industrial and commercial customers are being adequately maintained during war conditions?

(4) All factors considered, has the position of gas in the commercial cooking and baking fields been enhanced from the competitive and other an-

gles by the experiences in the camps, war posts, etc.?

(5) Maintaining commercial cooking equipment under war conditions, where A-1-J Priority or better is required for replacement of new equipment.

(6) Experiences with auxiliary fuel and auxiliary fuel utilization equipment for industrial customers.
Effect of above on future business.

(7) Effect of Priorities, etc., on industrial gas equipment.

(8) Recent progress in applying gas to aluminum heat treating.

(9) Can industrial gas men effectively help small manufacturers secure war contracts?

(10) All too frequently the statement is made that certain types of industrial gas loads are not profitable to gas companies. Should all activities be directed toward developing, advertising and publicizing only those processes that show increased thermal efficiencies compared with oil fuel? Is it better to have a smaller load all portions of which are regarded as definitely profitable, rather than larger loads with questionable profit?

(11) Effect of national nutrition plan on relations with commercial cooking and baking customers.

(12) Application of step rates, minimum bills, etc. to billing of industrial customers during periods of curtailment.

At some time during the afternoon everyone present took part in the discussion of one or more of these topics. Before the session closed, Chairman Owens presented the gavel to incoming Chairman Gardner. The thanks of the Section were extended to Mr. Owens for the sound leadership he had given the Section during the past year and he was commended particularly for the speed and effectiveness with which the Section's activities were streamlined and geared to the problems of gas in war production.

Uncle Sam's army "locker trunks" are produced on faster schedule because drying time was reduced. Gas unit heaters did the trick.

◆

Flame annealing of brass and steel shell cases is now in full production. Another development of "furnaceless" heat treating, as Bob LeMay says.

◆

Coffee is free to the 6800 employees of the Northern Pump Company, Minneapolis. But these same employees spend approximately $1,000,000 annually for food brought to their work benches on 38 nine-foot long bottled-gas-heated commissary wagons attended by 38 pretty "servettes."

Congratulations to Bill Hepburn, the first industrial gas man to receive the Munroe Award. Hep is a real old timer who knows how to apply his wealth of experience to today's most important problems.

◆

Selecting, installing and operating standby systems of glass plants using natural gas is developing into a distinct art. Butane-propane and oil systems are used in similar plants in the same city. Take your choice, boys.

◆

Shell loading speeded by silica gel dehydrators. The time gap between powder and ultimate shell loading at a southern ordnance plant has been reduced by several hours as the result of a recent installation of silica gel dehydrators. The shell loading plant consists of a variety of buildings housing three powder and shell production lines, powder drying houses, and storage and shipping buildings. Two production lines are equipped with dehydrating air conditioning units, and others will be changed over with later plant expansion. Major equipment consists of two rotary dehydrators. Used in connection with these units are two four-compartment dryers. Powder for shell loading is placed on flat trays in the dryers and conditioned air is circulated over and around the trays from the dehydrator. A low humidity of 5 per cent or less, required for drying powder to a maximum efficiency, is consistently maintained.

Part of the Army's rolling equipment such as glass windshields, glass insulation, ceramic spark plugs and glass battery parts are a few of the ceramic items developed by gas heat.

◆

Public Utilities Wartime Workshop of Canada completed over 16,300 "bits and pieces" machine and other parts, particularly those which tend to make "bottlenecks," in the munitions-producing industries—and has orders on hand for more than 300,000 of similar work.

◆

Industrial Gas helps win pennants. Every list of Army-Navy "E" awards contains the names of many firms that use gas for some of their most important operations.

◆

On a recent radio program of the Pittsburgh Chamber of Commerce, Edward M. Borger, President, The Peoples Natural Gas Company, was interviewed on "Natural Gas in War Production." What have you done to get gas in war production on your local stations? You've got a story to tell.

SAD BUT TRUE

Headline in *Industrial Gas Times*, London—"Gas for Crematoria, A Little Known But Growing Use for Gas."

Such are the fortunes of war! (It takes 550 cu.ft. per cremation.)

INDUSTRIAL AND COMMERCIAL GAS ADVERTISING FOR NOVEMBER

The National Advertising Committee of the Industrial and Commercial Gas Section, J. P. Leinroth, chairman, and F. B. Jones, vice-chairman, announces that full-page advertisements will appear in the trade and business magazines listed below during the month of November. These advertisements are prepared in cooperation with the Committee on National Advertising as a part of the industry's national advertising campaign.

MAGAZINE	THEME
General Manufacturing	
BUSINESS WEEK (Nov. 14—⅔ page)	The Secret Weapon—that's no secret at all . . . *Industrial Gas Engineering* helps speed vital war production.
Metals Industry	
STEEL (Nov. 16) INDUSTRIAL HEATING METAL PROGRESS HEAT TREATING & FORGING	He isn't in uniform . . . but the Industrial GAS Engineer plays a vital role in war production.
Baking Field	
BAKERS WEEKLY (Nov. 23)	These Soldiers eat . . . and it takes plenty of baking with GAS to round out that 5 pounds of food per day.
Ceramic Industry	
CERAMIC INDUSTRY	Millions of dishes for the Army . . . produced speedily, uniformly and at low cost—*with GAS*.
Restaurant Field	
AMERICAN RESTAURANT	By all means . . . *keep 'em cooking!* Let our *GAS* engineer help you get the most from your present *GAS* equipment.
CHAIN STORE AGE (Fountain and Restaurant Section)	The world's biggest "restaurant chain" . . . uses *GAS* for cooking and baking.

Technical SECTION

HAROLD L. GAIDRY, *Chairman*
CHARLES F. TURNER, *Vice-Chairman*
A. GORDON KING, *Secretary*

Technicians' Work Takes on New Significance in All-Out War Program

"The war in which we are so fully and so unequivocally engaged is a technicians' war. More than at any other time in the history of the world we depend upon the ability and genius of engineers, operators and construction men to produce the materials and equipment necessary to wage modern warfare."

THESE words of Ernest R. Acker, chairman of the Association's Committee on War Activities, at the Technical Section annual meeting in Chicago, October 5, were indicative of the weight and significance of the subsequent proceedings at which vital operating problems of a gas industry at war were discussed. At no time in the history of the Section, it was brought out, have its activities been of such consequence in maintaining the industrial fabric of the country.

In opening the meeting, Harold L. Gaidry, chairman of the Section, thanked the men who had done outstanding work during his administration and spoke of the serious times ahead. Mr. Gaidry was re-elected chairman of the Section for 1942-1943. Charles F. Turner, The East Ohio Gas Company, Cleveland, was elected vice-chairman.

The place of the Technical Section in the war effort was cogently described by Mr. Acker after he had pointed out that the war has already required drastic modifications of our operations and that still more were to come. "The Technical Section's place," he said, "is at the forefront of those who are willing to discard the old and take on the new, to maintain a flexibility of mind and a freshness of vision and viewpoint that will use disaster to achieve progress. . . . . It's ability lies in its ability to discard the statement, 'It can't be done,' and to substitute the question, 'How can it be done?' "

Previously Mr. Acker had paid tribute to the foresight and preparedness of the technical men in anticipating the needs of war and had described activities since the war began. He spoke of the publication, "War Protection of the Gas Industry," the study of the recovery of toluol, reduction of tin content in solder and the possible substitution of kerosene, gasoline or liquefied petroleum gases for crude oil in carburetted water gas production.

Mr. Acker concluded with a ringing appeal "for continued leadership in solving the war problems of the industry; for voluntary revision of methods and standards to permit the greatest possible contribution to the war effort; and for constant, aggressive technical development—looking to the continuation of a strong and enduring industry in the period after the war."

The full impact of the necessity to "do more with less" has been felt by the gas industry, D. P. Hartson, chairman of the Technical Section's Committee on War Activities, said in presenting a review of the Section's war record. Increased deliveries of gas for the war effort, increased demand for service, fewer men, greater difficulties of obtaining necessary materials, a heavier demand on supervisory and managerial time, and along with it all, the constant realization of a greater need for adequate property and plant protection, were some of the items mentioned by Mr. Hartson.

Pointing out that a shortage of regular raw materials for gas making has created an acute problem, Mr. Hartson said that "fortunately, consideration has been given by individuals and committees of the Technical Section for several years as to the possibilities of increasing gas output and interchangeability of various gases, as well as to means of using gas plant apparatus to do new duty." Gases with different characteristics, variable pressures in certain areas because of overloads on the system have brought utilization problems to the distribution engineer, he stated. Property protection, personnel training, maintenance of service and other technical problems related to the war effort have been given unstinted attention by the Technical Section, Mr. Hartson said.

Weighing the technical problems of a gas industry at war. Above, left to right—Charles F. Turner, Cleveland, newly elected Technical Section Vice-Chairman; Harold L. Gaidry, New Orleans, Section Chairman; S. P. Cobb, New York; Louis Shnidman, Rochester; and Captain R. C. Stratton, C.W.S., Chief Pyrotechnic Unit, Chicago

Left (around the table, left to right)—Captain R. C. Stratton, Chicago; Charles F. Turner, Vice-Chairman-Elect; Chairman Harold L. Gaidry; Gladys Hanshaw, New York; D. P. Hartson, Pittsburgh, past Section Chairman, and Chairman, Committee on War Activities; R. H. Arndt, Baltimore, Chairman, Gas Production Committee

Top row, left to right—A. V. Smith, Philadelphia; Charles F. Turner, Cleveland, Vice-Chairman-Elect; R. L. James, Harrisburg (back row); Raymond F. Hadley, Philadelphia, 1940 Beal Medal Winner; E. W. Guernsey, Baltimore, Vice-Chairman, Gas Conditioning Committee; H. D. Lehman, Philadelphia; Chairman, Gas Conditioning Committee; A. C. Cherry, Cincinnati; H. W. Nicolson, Newark; W. H. Ganley and Richard W. Stafford (co-authors of paper, "Value of Gasoline for Gas-Making Purposes"); L. J. Eck, Minneapolis

Left—R. H. Arndt, Baltimore, Chairman, Gas Production Committee

D. P. Hartson, Pittsburgh, Chairman, Technical Section Committee on War Activities; E. L. Sweeney, Everett; and H. B. Andersen, Philadelphia, Vice-Chairman, Distribution Committee. Photographed above (standing amid smoke rings) is L. J. Willien, Chicago, newly appointed WPB consultant

Reports of the following committees which are in printed form were distributed at the meeting: Gas Production, R. H. Arndt, chairman; Operation of Public Utility Motor Vehicles, Jean Y. Ray, chairman; Chemical, R. J. Sheridan, chairman; Gas Conditioning, H. D. Lehman, chairman; and Distribution, C. S. Goldsmith, chairman. These reports are available at Association headquarters.

The proposed use of gasoline as a substitute for gas oil in water gas manufacture aroused considerable discussion at the meeting. Results of an operating study by W. H. Ganley, Falley Petroleum Co., Chicago, and R. W. Stafford, Connelly Iron Sponge & Governor Co., Chicago, were made available to the delegates. Tests were made at the Fond du Lac plant of the Wisconsin Power and Light Co. on Sept. 2, 1942 at the request of the Chicago Office of Petroleum Coordinator, and, according to the authors, the data resulting justified the following conclusions:

1. Raw gasoline can be successfully gasified in a carburetted water gas machine.
2. These tests indicated a cracking temperature of about 1450° F. as best for Fond du Lac. It is believed that with a standard three shell machine a higher temperature will be required. For any given machine, the proper temperature should be determined experimentally.
3. The set capacity is approximately the same with gasoline as with the oils normally used in the manufacture of carburetted water gas.
4. Higher fuel cracking efficiencies can be obtained by the use of gasoline.
5. The tar produced from gasoline is materially less than from the oils normally used.
6. The main problem in the use of gasoline is handling and storage, including state and local regulations.
7. With the present price and tax structure, it is not economical to use gasoline. Action should be started to have the 1½¢ Federal tax law changed so that it will not apply on gasoline used for gas-making purposes, since it would be used to release fuel oils and gas oils which are badly needed by war industries which are unable to convert to gasoline.

Based on current costs of gasoline, the Fond du Lac test, including Federal tax, ran slightly over 8¢ per M.C.F., in excess of costs of using fuel oil at present market price, it was reported. This is exclusive of tar credits which would increase the differential still further.

L. J. Willien, of Chicago, who has been appointed by the War Production Board as a consultant on manufactured gas, called attention to similar tests which have been made by the Rochester Gas & Electric Corp. and expressed the belief that the results were promising and investigations should be continued.

In the absence of Mr. Goldsmith, chairman of the Distribution Committee, who headed a group studying the possibilities of using low tin content solder in reassembling gas meters, the vice-chairman, H. B. Andersen of Philadelphia, reviewed the results to date. Discussion centered on experience with solder of 30% tin content and particularly the tests conducted by the Consolidated Edison Co. of New York, Inc., results of which were reported by C. P. Xenis and A. F. Kochendorfer in the October issue of the A. G. A. MONTHLY. There was some difference of opinion and a committee was appointed to study the matter further and make recommendations to the War Production Board.

Linn Edsall, of Philadelphia, vice-chairman of the Committee on Operation of Public Utility Motor Vehicles, presented an informative and valuable review of the new Office of Defense Transportation General Order 21 and its effect on utility motor fleets which is published in this issue.

A comprehensive paper on nitric oxide control was abstracted by Louis Shnidman of the Rochester Gas & Electric Corp., Rochester, N. Y., who described the control of deposits by the use of especially developed slide testers located at the plant and at various points of the distribution system and on consumers' premises. He also discussed a simplified method developed for determining nitric oxide in fuel gases which was standardized by the use of synthetic mixtures containing nitric oxide. It was found that the source of nitric oxide in the gas was from the products of combustion used in the heating cycle.

Control of the oxide boxes in regard to nitric oxide removal is most important, Mr. Shnidman revealed. Fresh, unused oxide shows little or no capacity for removing nitric oxide while foul oxide shows a definite ability to do so, he said. A further test was developed by means of which the revivification of the oxide was controlled so that when returned to service, no difficulty was encountered in regard to nitric oxide liberation or nitric oxide troubles, he reported.

Research on organic sulphur financed by

organic sulfur investigation for the Rochester Gas & Electric Corporation.

In addition to the work looking toward the development of general laboratory methods, Dr. Guernsey said, it has been the intent to study the sulfur compounds in a limited number of samples of typical gases in a more fundamental way—that is by procedures in which individual compounds would be more positively identified by their unique physical properties.

The Technical Section meeting concluded with a report on microbiological anaerobic corrosion research by Dr. R. F. Hadley, Susquehanna Pipe Line Company, Philadelphia, whose outstanding work on this subject won him the Beal medal in 1940. Discussing research at Rutgers University, he said the objective is primarily to discover a method of locating easily those corrosive areas in soil which have heretofore defied detection. He mentioned two methods of doing this: first, an intensity method which is made by the measurement of three redox potentials of the soil, which holds great promise; second, a method of measuring the reductive capacity of the soil.

"Ultimately," Dr. Hadley said, "we hope to have the apparatus somewhat in the nature of a reactivity cane that can be used to indicate how corrosive the soil is from a microbiological anaerobic standpoint."

NATURAL GAS MEETING

(Continued from page 386)

vey is being made in connection with the same type of survey being made by the Production Committee studying oil reserves because some of the gas reserves are in dry gas fields, some in fields producing oil occurring in separate horizons, and some in condensate fields. Still others are in solution with the oils and in horizons in such quantities that they may become major reserves.

"Our next problem was to make a survey of the market demands and the pipe line capacities to determine whether or not the market demands could be met. With the quantities of gas and the tremendous reserves, as compared with the balance of the country, one would think there was nothing to worry about, but the transportation bottleneck is ever present in all the problems of war.

"During the year 1941, District 3 produced and sent to market 1 trillion, 650 billion cubic feet of gas, of which 350 billion was exported, mostly to Districts 2 and 4, and the balance used within the district. We estimate a 20% increase this year and a peak demand for the district of 7 billion cubic feet.

"From the pipe line surveys made to date, it looks as if this district will be able to meet market demands but conditions are changing rapidly. For instance, in our own system (United Gas Pipe Line Company) we have had an inquiry concerning availability of some 40 million cubic feet of gas additional for a proposed war industry which, if it comes this year, will be difficult to meet."

Mr. McGowan also discussed the problem of assisting in augmenting the supply of crude oil to 24-inch lines.

District 4

Robert W. Hendee, General Manager, Colorado Interstate Gas Co., Colorado Springs, Colo., and Chairman of District 4, explained that his district, comprising the Rocky Mountain States of Montana, Wyoming, Colorado, Idaho and Utah, has not been faced with the problem confronting the committees in the four other districts with their crowded industrial areas. However, camps for armed forces have arisen all over this area, he stated, and natural gas companies have met war requirements by providing natural gas service such as space heating, cooking, water heating and baking in camps, and for diverse applications in regular industrial plants.

"These requirements were at first met in the district by additions to compressor stations, paralleling lines and drilling additional wells," he said, but indicated that there was a limit to elasticity of pipe lines. He mentioned one large company which already has felt it necessary to request several large industrial customers, to arrange for some other fuel supply. Mr. Hendee spoke with concern of the impending loss of manpower and the difficulties involved in gasoline rationing in an area where populated centers are widely separated.

District 5

William Moeller, Jr., Vice-President, Southern California Gas Co., Los Angeles, and Chairman, District 5, said that there were 1,925,000 natural gas customers in that area and that a peak demand of 1 billion 350 million cubic feet was expected in January, 1943.

The principal problem of that region he indicated, is that of equating casinghead gas production to peak load demand. The problem is tied up with oil production and is further complicated by the large seasonal variations because of the general use of gas for house heating. Referring to the close cooperation worked out between the gas and gasoline sections, Mr. Moeller expressed confidence that the war problems would be solved, although some curtailment in Southern California at least would be necessary.

A system of underground gas storage is being worked out and, together with fuel oil standby, should serve to alleviate the peak load problem, Mr. Moeller said. He said that fuel oil is the only alternate fuel on the West Coast for many purposes.

GAS SALES UP 12.10%

Sales of gas to customers of the Public Service Electric and Gas Co., Newark, N. J. and affiliated companies increased 12.10 per cent in the nine months ending September 30, as compared with the same period of the previous year.

Sweeney Advanced

E. L. Sweeney

E. L. SWEENEY has been advanced from assistant superintendent to superintendent of the Everett, Mass., plant of the Boston Consolidated Gas Company.

Mr. Sweeney was chairman of the Chemical Committee of the American Gas Association in 1940-1941 and is now chairman of the Subcommittee on the Gas Chemists' Handbook. He has made many valuable contributions to Association activities.

Heads Legion Post

S. J. Modzikowski

S. J. MODZIKOWSKI, chemical engineer of The Peoples Gas Light and Coke Company, Chicago, has been elected Commander of the Peoples Gas Post of the American Legion.

Mr. Modzikowski was formerly actively engaged in American Gas Association work, having served as chairman of the Chemical Committee and vice-chairman of the Technical Section. He is in charge of the physical and chemical testing laboratory of The Peoples Gas Light and Coke Company.

New American Standards

TWO American Standards, one governing requirements for installation of gas-burning equipment in power boilers (ASA No.: Z21.33-1942), and the other governing listing requirements for gas valves (ASA No.: Z21.15-1942) have been approved by the American Standards Association. The first of these standards, which were developed under the leadership of the American Gas Association, covers such requirements as installation of burners and controls; gas piping and meters; inspections and tests; as well as boiler room ventilation, accessibility for cleaning and inspection, and flues and flue connections.

The approved Standard listing requirements for gas valves include such construction requirements as dimensions; compensation for wear; valve stems and handles; stops; latching type valves; strength; materials; assembly and marking; and such performance requirements as leakage; capacity; gas range burner valves with adjustable orfices, and continued operation.

Laboratories

GEORGE E. WHITWELL, *Chairman*
R. M. CONNER, *Director*
F. A. ALLEN, *Supervisor, Pacific Coast Branch*

Five-Year Period Extended in Wartime Modification of Appliance Approvals

By GEORGE E. WHITWELL

Chairman, A. G. A. Laboratories' Managing Committee

SOME 8 years ago, in order to encourage development and marketing of better types of gas appliances and enhance the significance of the Laboratories' Approval Seal displayed on them, the American Gas Association adopted a policy of limiting approvals to a period not exceeding 5 years. During this time such approvals might be renewed annually following a satisfactory examination of the manufacturer's production at his plant.

Under this policy it became necessary at the expiration of the fifth year following the original test for all provisions of approval standards in effect as of that later date to be fully met to permit further approval. As such standards were usually revised and strengthened at least every 2 years, in the great majority of cases resubmission for additional tests to determine whether all provisions were fully met was necessary before approval could again be extended.

New War Conditions

Since the war program began, growing shortages of materials and enforced use of substitutes became a matter of concern to all manufacturers. In order to provide necessary relief under emergency conditions, decision was reached early in 1942 to permit temporary extension of one year in the case of appliances, approval of which expired in 1942. In the meantime a comprehensive study of the subject was undertaken for the purpose of working out a plan which would meet all conditions involved.

Since this action was taken the output of domestic gas-burning appliances has been drastically curtailed as the result of various limitation orders, enormously increased military and naval needs and necessity for conservation of vital materials. As a consequence comparatively few models are now available for civilian use. Gas appliance production has been suspended for the duration of the war by many manufacturers while others have reduced the number of models in active production to a fraction of those formerly fabricated. Obviously under these circumstances it is neither practical nor possible to require changes under wartime conditions in equipment now on the approved list to enable it to meet new provisions of current approval requirements. In addition it is impossible to state what further restrictions may be imposed on all industry or the extent to which output may be further reduced.

For these and other reasons a modification of the present policy limiting appliance approvals to a 5-year period becomes a wartime necessity so that manufacturing might continue to produce equipment as formerly fabricated.

A great deal of attention has been devoted to this subject by the Approval Requirements Committee as well as by the Laboratories' Managing Committee. In addition to extensive discussions at several meetings over the past year a thorough study has been made of changes presented by current requirements as contrasted to those in effect 5 years back. After careful consideration several modifications have been made in the present policy governing extensions of approvals involving not only the actual approval of appliances during the wartime period but also provisions for their listing in the Laboratories' periodical, "Directory of Approved Gas Appliances and Listed Accessories."

Appliance Approvals Continued

Until further notice present appliance approvals may be continued without limitation to a 5-year period. Due to a forced suspension of production of a large proportion of equipment at present approved, such approvals will be "frozen" as of December 31, 1942, until a date to be determined later. Under this arrangement it will be possible for a manufacturer at a later date to make use of the unexpired period of his original 5-year approval which may remain after the end of the present year. In reaching this decision full recognition was given to the fact that no estimate can be made of the probable duration of the war. Following partial or complete termination of hostilities it is believed an extended period may occur during which transition from war to peace conditions will bring about a high degree of unsettlement and uncertainty. Adoption of a permanent policy as of this date was not considered practical.

Under this modified policy, appliances approved in 1937 whose 5-year of certification expires at the end of the current year may continue to receive approval although their approval has now run for the full 5 years and no unexpired period would remain at the end of 1942. For other models, certification of which expires in 1943 and subsequent years, 5-year approvals will be "frozen" until a date to be determined later. In all cases where production has been discontinued provision is made for its renewal upon a satisfactory examination by a Laboratories representative at the manufacturer's plant. The Laboratories are prepared to give prompt service in such cases where inspections of this nature are required.

Directory of Appliances Curtailed

The October 1942 issue of the Directory of Approved Gas Appliances and Listed Accessories will be the last published in complete form. This Directory will state on its cover page: *Save—Final Complete Directory until Victory.* It will also contain an introduction presenting a brief explanation of this plan bringing out the following facts:

Due to conversion to war purposes of many factories formerly producing gas appliances, the majority of approvals of equipment shown in the October 1942 Directory will be temporarily suspended at the end of the current year. Many manufacturers are, however, in position to undertake production promptly on receipt of orders carrying sufficient priority to enable procurement of essential materials. Approved models should therefore be readily available in such instances as factory inspections can be made by the Laboratories promptly on notification, and interested individuals notified when approval is reinstated. It is therefore important that this Directory be retained as a complete record of approved equipment.

The January 1943 Directory and subsequent issues will include only equipment in active production or on which approval has been renewed by inspection in the usual manner. As additional models are approved they will be included. References will also appear in each of the 1943 and later issues to the current October Directory to call attention to approvals which may be reinstated under conditions described above.

The importance of a constructive policy

which will permit continued availability of approved equipment vitally needed for our armed forces, defense housing, and the general public, will be obvious to all. It is believed that the modified policy described will not only accomplish this purpose but will greatly assist manufacturers in continuing to fabricate approved types. Great credit is due them for the manner in which they have faced the many obstacles arising in these difficult times. This fact alone entitles them to the industry's fullest cooperation.

HOME SERVICE BREAKFAST

(Continued from page 417)

let which was made available through the courtesy of Servel, Inc.

The National Nutrition Program was the pivot for the endeavors which were far reaching in the type of work done; in the extent of organization contacts, in the various interests considered and in the wide coverage of numbers, Miss Campbell reported: "It is especially gratifying" she said, "that community organizations, Nutrition Committees, Civilian Defense and Red Cross groups have relied on home service departments to provide leadership, instruction and headquarters for meetings and demonstrations."

Phases of the nutrition program have included a wide variety of special contacts extending not only to women in the community, but to groups set up for emergency feeding, training women new to foods problems, reaching into areas where people have changed their home locale and work with people of all ages, conditions and financial levels.

"In these war time activities," Miss Campbell asserted, "Home Service has not lost track of the fact that its obligation to its company is in keeping the story of equipment, its uses, its care and its flexibility always in the foreground in these varied contacts and in making additional friends, thus maintaining public acceptance and appreciation for domestic gas service."

In outlining the work of the 1943 committee, Miss Campbell, as chairman, indicated that one of the big jobs would be the compilation of an industry-wide questionnaire to make available facts and figures on the extent of community cooperation and home service wartime work and results.

The next division of work on the program is that of conservation—conservation of food in the two phases of food preservation and dehydration; and secondly, through study and explanation of better food preparation methods; also the conservation of fuel and equipment, money and time. In setting up this conservation program, the interested Federal agencies were consulted and their requests and suggestions incorporated in the plan of work.

The third phase of committee work will be that of Post-War Planning. Representation of Home Service has been requested in the membership of the American Gas Association Post-War Planning Committee by its chairman, A. M. Beebee of Rochester. Miss Campbell mentioned that it seemed an obligation of home service to assemble all known ways in which our equipment may be studied to meet problems of home makers. Continued cooperation will be given to all phases of the National Nutrition Program, in sponsorship of community activities, and in special promotion of Nutrition in Industry, so well set up by Servel Inc.

In closing Miss Campbell said: "From East to West, from North to South, all reports as you have seen in the fine coverage in the trade magazines and in the A. G. A. MONTHLY, have indicated an active program under way in our departments—only made possible through the support of our company sales managers and executives, and with the big contribution made by advertising and display. As chairman of the committee this next year, I enlist your continued cooperation."

Nutrition in Industry Plan

"Eat to Beat the Devil," the slogan of Servel's national Nutrition in Industry program, was the subject of a talk by Louis Ruthenburg, president of Servel, Inc., who outlined how home service cooperation was necessary to make the program effective. "From feeding the family at home," he said, "has grown the feeding of the family in the production factories. . . . In this program lie great opportunities for the gas utilities to serve. It is also a splendid opportunity for Home Service because it provides the necessary final machinery of transmission that is so essential to the entire program."

The Servel industrial feeding program attracted the attention and full cooperation of the Office of Defense Health and Welfare Services in Washington, it was emphasized by the next speaker, R. S. Goodhart, M.D., technical advisor of nutrition in that office. Dr. Goodhart discussed the relation of nutrition to morale, particularly as is affects war workers who, he pointed out, are under increased strain and are not always in good health when they undertake war plant work.

The meeting closed with "A Word to the Wise" from Ernest R. Acker, president, Central Hudson Gas & Electric Corp., Poughkeepsie, and chairman, A. G. A. Committee on War Activities. Referring to natural and manufactured gas limitation orders and an impending government educational program in connection with fuel conservation, Mr. Acker declared that home service people can be of direct service to gas customers generally in telling the story of conservation and tying it in with the national program. He urged every unit of the industry to cooperate not only in the conservation of fuel for cooking but in all other uses.

Greatly assisting in the operation of the home service breakfast was a hostess committee consisting of: Ruth Sheldon, chairman, Aileen E. Witmer, Mrs. Helena Kunkel, Hulda Ungericht, Marian E. Schleicher, Mrs. Margaret Crooks, May McLoughlin, Kathryn Heffernen, Jane Roberts, Ruth Bush, and Colleen Fowler. Flowery compliments for all at the breakfast were presented by Surface Combustion through R. L. Towne, sales manager.

Ancient History

By VIRGINIA SCOTT MINER

Who remembers from long ago
The warmth of the kitchen range,
When woolens swathed us from chin to toe,
And oranges were passing strange?
Who in these days can claim to know
The methods of getting dressed
Behind the portly base-burner's glow,
Spaced right from the view of the rest?

There's much to be said for our present ways
And our great god, Thermostat,
But never a warmth deserves more praise
Than the rush of comfort that

Bloomed with its scarlet-petaled rays
From the old base-burner's mica glaze
And warmed us in to the very stays
In those blessed, good, old, ancient days—

Those days that scarcely a soul at all
Likes to admit she *can* recall!

—*Ladies Home Journal*

IT'S CATCHING

When a well-known comic artist went on the radio recently for a large electric appliance manufacturer he was asked by the master of ceremonies how he felt. The reply was "I'm cookin', man, I'm cookin' with gas." He was cut off the air forthwith.

Personnel Service

SERVICES OFFERED

Engineer—26 years with engineering organization managing and operating utilities. Thoroughly familiar both natural and artificial gas. Broad training in rates, valuation, reports, surveys, property records, etc. B.S. degree in engineering. Available immediately for permanent connection, any location. **1450.**

POSITIONS OPEN

Foreman in water gas plant of 10,000 M daily capacity to supervise operation and maintenance. State age, experience salary expected and give references. **0371.**

Research Engineer for investigation of new methods of gas manufacture. Experience in gas industry desirable but research training and ability of paramount importance. Give full details with military status in letter. Enclose photograph. **0372.**

1942-1943 Advisory Council

FRANK H. ADAMS.....Toledo, Ohio
A. M. BEEBEE.....Rochester, N. Y.
JAMES B. BLACK.....San Francisco, Calif.
E. J. BOYER.....Minneapolis, Minn.
DAVIS M. DEBARD.....New York, N. Y.
LYMAN L. DYER.....Dallas, Texas
F. B. FLAHIVE.....New York, N. Y.
C. E. GALLAGHER.....Cleveland, Ohio
N. HENRY GELLERT.....Philadelphia, Pa.
F. M. GOODWIN.....Newton Centre, Mass.
H. D. HANCOCK.....New York, N. Y.
R. H. HARGROVE.....Shreveport, La.
D. P. HARTSON.....Pittsburgh, Pa.
E. N. KELLER.....Philadelphia, Pa.
CONRAD N. LAUER.....Philadelphia, Pa.
F. A. NEWTON.....New York, N. Y.
GEORGE F. B. OWENS.....Brooklyn, N. Y.
CLIFFORD E. PAIGE.....Brooklyn, N. Y.
FRANK H. PAYNE.....Erie, Pa.
FRANKLIN T. RAINEY.....Columbus, Ohio
R. J. RUTHERFORD.....Worcester, Mass.
ELMER F. SCHMIDT.....Dallas, Texas
N. T. SELLMAN.....New York, N. Y.

AFFILIATED ASSOCIATIONS

Association of Gas Appliance and Equipment Manufacturers
Pres.—W. F. Rockwell, Pittsburgh-Equitable Meter Co., Pittsburgh, Pa.
Exec. Sec.—C. W. Berghorn, 60 East 42nd St., New York, N. Y.

Canadian Gas Association
Pres.—Frank D. Howell, Dominion Natural Gas Co., Ltd., Brantford, Ont.
Sec.-Tr.—G. W. Allen, 7 Astley Ave., Toronto.

Gas Meters Association of Florida-Georgia
Pres.—Irwin J. Wynn, Gainesville Gas Co., Gainesville, Fla.
Sec.-Tr.—Mildred M. Lane, Florida Public Service Co., Orlando, Fla.

Illinois Public Utilities Association
Pres.—E. F. Kelly, Central Illinois Public Service Co., Springfield, Ill.
Sec.—Jack Abbey, Illinois Building, Springfield, Ill.

Indiana Gas Association
Pres.—C. V. Sorenson, Northern Indiana Public Service Co., Hammond, Ind.
Sec.-Tr.—Paul A. McLeod, Public Service Co. of Indiana, Inc., Newcastle, Ind.

Michigan Gas Association
Pres.—Henry Fink, Michigan Consolidated Gas Co., Detroit, Mich.
Sec.-Tr.—A. G. Schroeder, Michigan Consolidated Gas Co., Grand Rapids, Mich.

Maryland Utilities Association
Pres.—Lewis Payne, Eastern Shore Public Service Co., Salisbury, Md.
Sec.—J. Russell Hopkins, Eastern Shore Public Service Co., Salisbury, Md.

Mid-Southeastern Gas Association
Pres.—Ralph H. Fry, Raleigh Gas Co., Raleigh, N. C.
Sec.-Treas.—Edward W. Ruggles, Mid-Southeastern Gas Association, Raleigh, N. C.

Mid-West Gas Association
Pres.—H. K. Wrench, Minneapolis Gas Light Co., Minneapolis, Minn.
Sec.-Tr.—Roy B. Searing, Sioux City Gas & Electric Co., Sioux City, Iowa.

Missouri Association of Public Utilities
Pres.—D. W. Snyder, Jr., Missouri Power & Light Co., Jefferson City, Mo.
Sec.-Tr.—N. R. Beagle, Missouri Power & Light Co., Jefferson City, Mo.
Asst. Sec.—Jesse Blythe, 103 West High St., Jefferson City, Mo.

New Jersey Gas Association
Pres.—Frank H. Darlington, Peoples Gas Co., Glassboro, N. J.
Sec.-Tr.—H. A. Sutton, Public Service Electric and Gas Co., Newark, N. J.

Ohio Gas and Oil Association
Pres.—T. C. Jones, The Delaware Gas Co., Delaware, Ohio.
Sec.-Tr.—Frank B. Maullar, 811 First National Bank Bldg., Columbus, Ohio.

Oklahoma Utilities Association
Pres.—W. L. Woodward, President, Zenith Gas System, Inc., Alva, Okla.
Sec.—Kate A. Niblack, 625 Biltmore Hotel, Oklahoma City, Okla.

Pacific Coast Gas Association
Pres.—F. M. Banks, Southern California Gas Co., Los Angeles, Calif.
Mang. Dir.—Clifford Johnstone, 447 Sutter St., San Francisco, Calif.

Pennsylvania Gas Association
Pres.—P. T. Dashiell, The Philadelphia Gas Works Co., Philadelphia, Pa.
Sec.—William Naile, Lebanon Valley Gas Co., Lebanon, Pa.

Pennsylvania Natural Gas Men's Association
Pres.—C. E. Bennett, Manufacturers Light & Heat Co., Pittsburgh, Pa.
Exec. Sec.—Mark Shields, Grant Bldg., Pittsburgh, Pa.

Southern Gas Association
Pres.—L. B. Denning, Jr., Community Natural Gas Co., Dallas, Texas.
Sec.-Tr.—L. L. Baxter, Arkansas Western Gas Co., Fayetteville, Ark.

Wisconsin Utilities Association
Pres.—Edward R. Felber, Madison Gas & Electric Co., Madison, Wis.
Exec.-Sec.—A. F. Herwig, 135 West Wells St., Milwaukee, Wis.

AMERICAN GAS ASSOCIATION

HEADQUARTERS, 420 LEXINGTON AVE., NEW YORK, N. Y.

OFFICERS AND DIRECTORS

President	ARTHUR F. BRIDGE	Los Angeles, Calif.
Vice-President	ERNEST R. ACKER	Poughkeepsie, N. Y.
Treasurer	J. L. LLEWELLYN	Brooklyn, N. Y.
Managing Director	ALEXANDER FORWARD	New York, N. Y.
Secretary	KURWIN R. BOYES	New York, N. Y.
Director, Publicity-Advg.	C. W. PERSON	New York, N. Y.
Sectional Vice-Pres.	L. A. MAYO	Hartford, Conn.
Sectional Vice-Pres.	B. H. GARDNER	Columbus, Ohio
Sectional Vice-Pres.	JOHN A. ROBERTSHAW	Youngwood, Pa.
Sectional Vice-Pres.	BURT R. BAY	Omaha, Nebraska
Sectional Vice-Pres.	B. A. SEIPLE	Asbury Park, N. J.
Sectional Vice-Pres.	HAROLD L. GAIDRY	New Orleans, La.

R. G. BARNETT	Portland, Ore.	E. P. NOPPEL	New York, N. Y.
JOHN W. BATTEN	Detroit, Mich.	BRUNO RAHN	Milwaukee, Wis.
WALTER C. BECKJORD	New York, N. Y.	HUDSON W. REED	Philadelphia, Pa.
JAMES A. BROWN	New York, N. Y.	J. FRENCH ROBINSON	Cleveland, Ohio
CHARLES M. COHN	Baltimore, Md.	W. F. ROCKWELL	Pittsburgh, Pa.
WATSON E. DERWENT	Rockford, Illinois	HERMAN RUSSELL	Rochester, N. Y.
RALPH L. FLETCHER	Providence, R. I.	LOUIS RUTHENBURG	Evansville, Ind.
D. W. HARRIS	Shreveport, La.	MARCY L. SPERRY	Washington, D. C.
GEORGE S. HAWLEY	Bridgeport, Conn.	MAJOR T. J. STRICKLER	Kansas City, Mo.
D. A. HULCY	Dallas, Texas	E. J. TUCKER	Toronto, Ont.
WILLIAM ALTON JONES	New York, N. Y.	H. CARL WOLF	Atlanta, Ga.
H. N. MALLON	Bradford, Pa.	P. S. YOUNG	Newark, N. J.

SECTION OFFICERS

ACCOUNTING—Chairman	L. A. MAYO	Hartford, Conn.
Vice-Chairman	O. H. RITENOUR	Washington, D. C.
INDUSTRIAL AND COMMERCIAL GAS—Chairman	B. H. GARDNER	Columbus, Ohio
Vice-Chairman	CHARLES G. YOUNG	Springfield, Mass.
MANUFACTURERS—Chairman	JOHN A. ROBERTSHAW	Youngwood, Pa.
NATURAL GAS—Chairman	BURT R. BAY	Omaha, Nebraska
Vice-Chairman	R. E. WERTZ	Amarillo, Texas
RESIDENTIAL—Chairman	B. A. SEIPLE	Asbury Park, N. J.
Vice-Chairman	C. V. SORENSON	Hammond, Ind.
TECHNICAL—Chairman	HAROLD L. GAIDRY	New Orleans, La.
Vice-Chairman	CHARLES F. TURNER	Cleveland, Ohio
PUBLICITY AND ADVERTISING COMMITTEE—Chairman	C. A. TATTERSALL	New York, N. Y.

A. G. A. TESTING LABORATORIES—1032 East 62nd Street, Cleveland, Ohio
1425 Grande Vista Avenue, Los Angeles, Calif.

Chairman, Managing Committee	GEORGE E. WHITWELL	Philadelphia, Pa.
Director	R. M. CONNER	Cleveland, Ohio
Supervisor, Pacific Coast Branch	F. A. ALLEN	Los Angeles, Calif.

WASHINGTON OFFICE:
George W. Bean, Fuel Consultant, Albee Bldg., Washington, D. C.

PRINTED IN U. S. A.